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The Complete Works of

VARRO

(116 BC–27 BC))



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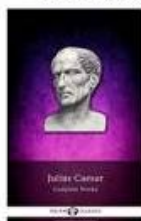
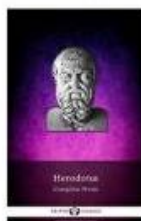
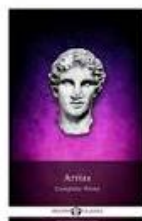
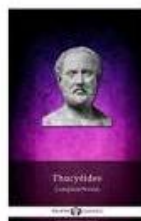


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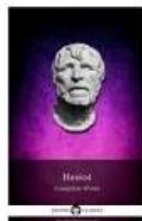
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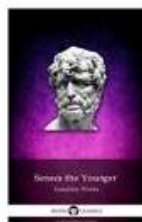
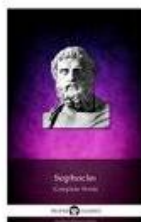
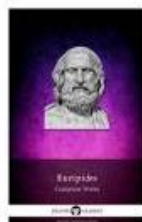
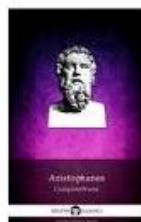
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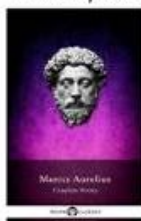
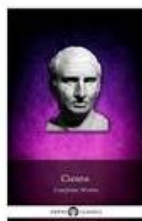
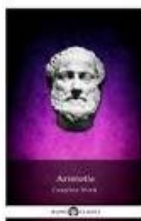
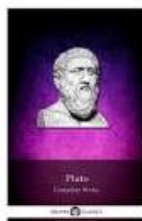
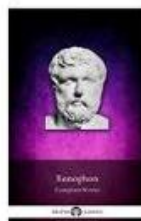
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The Complete Works of
MARCUS TERENTIUS VARRO



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Complete Works of Marcus Terentius Varro

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The Translations



Rieti, as seen from San Mauro hill, east of the city, Lazio, central Italy — Varro was born near Reate (now Rieti).



Remains of a Roman bridge at Rieti, third century BC

ON AGRICULTURE



Varro was born in Reate, now Rieti, to a family of equestrian rank, which owned a large farm in the Reatine plain, near Lago di Ripa Sottile. He supported Pompey, reaching the office of praetor, after having been tribune of the people, quaestor and curule aedile. Varro's literary output was prolific; with scholars estimating him to have produced 74 works in approximately 620 books, of which only one work survives complete, although we possess numerous fragments of the others, many contained in Gellius' *Attic Nights*. Regarded as "the most learned of the Romans" by Quintilian (*Inst. Or.* X.1.95), Varro was recognised as an important source by many other ancient authors, including Cicero, Pliny the Elder, Virgil, Aulus Gellius, Macrobius, Augustine and Vitruvius, who credits him with a book on architecture.

Varro's only complete extant work is *Rerum rusticarum libri tres* (On Agriculture), formed of three books. The work concerns country affairs, opening with an effective setting of the agricultural scene, while also employing dialogue. The first book covers the themes of agriculture and farm management, the second deals with sheep and oxen, while the third concludes with poultry and the keeping of other animals, including bees and fishponds. The text is notable for its lively interludes, as well as graphic background detail concerning political events, of which Varro was a key figure.



Gnaeus Pompeius Magnus, Pompey the Great, (106 – 48 BC), Julius Caesar's great rival, was a military and political leader of the late Roman Republic, as well as a legendary general. Varro supported Pompey politically.



Gallo-Roman harvesting machine — relief from Trier

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Lago di Ripa Sottile, nar the farm owned by Varro's family

**LOEB CLASSICAL LIBRARY TRANSLATION
(HOOPER)**

Translated by William Davis Hooper and Revised by Harrison Boyd Ash

BOOK I

[1.1] Had I possessed the leisure, Fundania, I should write in a more serviceable form what now I must set forth as I can, reflecting that I must hasten; for if man is a bubble, as the proverb has it, all the more so is an old man. For my eightieth year admonishes me to gather up my pack before I set forth from life. [2] Wherefore, since you have bought an estate and wish to make it profitable by good cultivation, and ask that I concern myself with the matter, I will make the attempt; and in such wise as to advise you with regard to the proper practice not only while I live but even after my death. [3] And I cannot allow the Sibyl to have uttered prophecies which benefited mankind not only while she lived, but even after she had passed away, and that too people whom she never knew — for so many years later we are wont officially to consult her books when we desire to know what we should do after some portent — and not do something, even while I am alive, to help my friends and kinsfolk. [4] Therefore I shall write for you three handbooks to which you may turn whenever you wish to know, in a given case, how you ought to proceed in farming. And since, as told, the gods help those who call upon them, I will first invoke them — not the Muses, as Homer and Ennius do, but the twelve councillor-gods; and I do not mean those urban gods, whose images stand around the forum, bedecked with gold, six male and a like number female, but those twelve gods who are the special patrons of husbandmen. [5] First, then, I invoke Jupiter and Tellus, who, by means of the sky and the earth, embrace all the fruits of agriculture; and hence, as we are told that they are the universal parents, Jupiter is called “the Father,” and Tellus is called “Mother Earth.” And second, Sol and Luna, whose courses are watched in all matters of planting and harvesting. Third, Ceres and Liber, because their fruits are most necessary for life; for it is by their favour that food and drink come from the farm. [6] Fourth, Robigus and Flora; for when they are propitious the rust will not harm the grain and the trees, and they will not fail to bloom in their season; wherefore, in honour of Robigus has been established the solemn feast of the Robigalia, and in honour of Flora the games called the Floralia. Likewise I beseech Minerva and Venus, of whom the one protects the oliveyard and the other the garden; and in her honour the rustic Vinalia has been established. And I shall not fail to pray also to Lympha and Bonus Eventus, since without moisture all tilling of the ground is parched and barren, and without success and “good issue” it is not tillage but vexation. [7] Having now duly invoked these divinities, I shall relate the conversations which we had recently about agriculture, from which you may learn what you ought to do; and if matters in which you are interested are not treated, I shall indicate the writers, both Greek and Roman, from whom you may learn them.

Those who have written various separate treatises in Greek, one on one subject, another on another, are more than fifty in number. [8] The following are those whom you can call to your aid when you wish to consider any point:

Hiero of Sicily and Attalus Philometor; of the philosophers, Democritus the naturalist, Xenophon the Socratic, Aristotle and Theophrastus the Peripatetics, Archytas the Pythagorean, and likewise Amphilocho of Athens, Anaxipolis of Thasos, Apollodorus of Lemnos, Aristophanes of Mallos, Antigonos of Cyme, Agathocles of Chios, Apollonius of Pergamum, Aristandrus of Athens, Bacchius of Miletus, Bion of Soli, Chaerestus and Chaereas of Athens, Diodorus of Priene, Dion of Colophon, Diophanes of Nicaea, Epigenes of Rhodes, Euagon of Thasos, the two Euphronii, one of Athens and the other of Amphipolis, Hegesias of Maronea, the two Menanders, one of Priene and the other of Heraclea, Nicesius of Maronea, and Pythion of Rhodes. [9] Among other writers, whose birthplace I have not learned, are: Androtion, Aeschion, Aristomenes, Athenagoras, Crates, Dadis, Dionysius, Euphiton, Euphorion, Eubulus, Lysimachus, Mnaseas, Menestratus, Plentiphanes, Persis, Theophilus. All these whom I have named are prose writers; others have treated the same subjects in verse, as Hesiod of Ascra and Menecrates of Ephesus. [10] All these are surpassed in reputation by Mago of Carthage, who gathered into twenty-eight books, written in the Punic tongue, the subjects they had dealt with separately. These Cassius Dionysius of Utica translated into Greek and published in twenty books, dedicated to the praetor Sextilius. In these volumes he added not a little from the Greek writers whom I have named, taking from Mago's writings an amount equivalent to eight books. Diophanes, in Bithynia, further abridged these in convenient form into six books, dedicated to King Deiotarus. [11] I shall attempt to be even briefer and treat the subject in three books, one on agriculture proper, the second on animal husbandry, the third on the husbandry of the steading, omitting in this book all subjects which I do not think have a bearing on agriculture. And so, after first showing what matter should be omitted, I shall treat of the subject, following the natural divisions. My remarks will be derived from three sources: what I have myself observed by practice on my own land, what I have read, and what I have heard from experts.

[2.1] On the festival of the Sementivae I had gone to the temple of Tellus at the invitation of the aeditumnus (sacristan), as we have been taught by our fathers to call him, or of the aedituus, as we are being set right on the word by our modern purists. I found there Gaius Fundanius, my father-in-law, Gaius Agrius, a Roman knight of the Socratic school, and Publius Agrasius, the tax-farmer, examining a map of Italy painted on the wall. "What are you doing here?" said I. "Has the festival of the Sementivae brought you here to spend your holiday, as it used to bring our fathers and grandfathers?" [2] "I take it," replied Agrius, "that the same reason brought us which brought you — the invitation of the sacristan. If I am correct, as your nod implies, you will have to await with us his return; he was summoned by the aedile who has supervision of this temple, and has not yet returned; and he left a man to ask us to wait for him. Do you wish us then meanwhile to follow the old proverb, 'the Roman wins by sitting still,' until he returns?" "By all means," replied

Agrius; and reflecting that the longest part of the journey is said to be the passing of the gate, he walked to a bench, with us in his train.

[3] When we had taken our seats Agrasius opened the conversation: "You have all travelled through many lands; have you seen any land more fully cultivated than Italy?" "For my part," replied Agrius, "I think there is none which is so wholly under cultivation. Consider first: Eratosthenes, following a most natural division, has divided the earth into two parts, [4] one to the south and the other to the north; and since the northern part is undoubtedly more healthful than the southern, while the part which is more healthful is more fruitful, we must agree that Italy at least was more suited to cultivation than Asia. In the first place, it is in Europe; and in the next place, this part of Europe has a more temperate climate than we find farther inland. For the winter is almost continuous in the interior, and no wonder, since its lands lie between the arctic circle and the pole, where the sun is not visible for six months at a time; wherefore we are told that even navigation in the ocean is not possible in that region because of the frozen sea." [5] "Well," remarked Fundanius, "do you think that anything can germinate in such a land, or mature if it does germinate? That was a true saying of Pacuvius, that if either day or night be uninterrupted, all the fruits of the earth perish, from the fiery vapour or from the cold. For my part, I could not live even here, where the night and the day alternate at moderate intervals, if I did not break the summer day with my regular midday nap; [6] but there, where the day and the night are each six months long, how can anything be planted, or grow, or be harvested? On the other hand, what useful product is there which not only does not grow in Italy, but even grow to perfection? What spelt shall I compare to the Campanian, what wheat to the Apulian, what wine to the Falernian, what oil to the Venafran? Is not Italy so covered with trees that the whole land seems to be an orchard? [7] Is that Phrygia, which Homer calls 'the vine-clad,' more covered with vines than this land, or Argos, which the same poet calls 'the rich in corn,' more covered with wheat? In what land does one iugerum bear ten and fifteen cullei of wine, as do some sections of Italy? Or does not Marcus Cato use this language in his *Origines*? 'The land lying this side of Ariminum and beyond the district of Picenum, which was allotted to colonists, is called Gallo-Roman. In that district, at several places, ten cullei of wine are produced to the iugerum.' Is not the same true of the district of Faventia? The vines there are called by this writer *trecenariae*, from the fact that the iugerum yields three hundred amphorae." And he added, turning to me, "At least your friend, Marcius Libo, the engineer officer, used to tell me that the vines on his estate at Faventia bore this quantity. [8] The Italian seems to have had two things particularly in view in his farming: whether the land would yield a fair return for the investment in money and labour, and whether the situation was healthful or not. If either of these elements is lacking, any man who, in spite of that fact, desires to farm has lost his wits, and should be taken in charge by his kinsmen and family. For no sane man should be willing

to undergo the expense and outlay of cultivation if he sees that it cannot be recouped; or, supposing that he can raise a crop, if he sees that it will be destroyed by the unwholesomeness of the situation. [9] But, I think, there are some gentlemen present who can speak with more authority on these subjects; for I see Gaius Licinius Stolo and Gnaeus Tremelius Scrofa approaching, one of them a man whose ancestors originated the bill to regulate the holding of land (for that law which forbids a Roman citizen to hold more than 500 iugera was proposed by a Stolo), and who has proved the appropriateness of the family name by his diligence in farming; he used to dig around his trees so thoroughly that there could not be found on his farm a single one of those suckers which spring up from the roots and are called stolones. Of the same farm was that Gaius Licinius who, when he was tribune of the plebs, 365 years after the expulsion of the kings, was the first to lead people, for the hearing of laws, from the comitium into the “farm” of the forum. [10] The other whom I see coming is your colleague, who was of the Commission of Twenty for parcelling the Campanian lands, Gnaeus Tremelius Scrofa, a man distinguished by all virtues, who is esteemed the Roman most skilled in agriculture.” “And justly so,” I exclaimed. “For his estates, because of their high cultivation, are a more pleasing sight to many than the country seats of others, furnished in a princely style. When people come to inspect his farmsteads, it is not to see collections of pictures, as at Lucullus’s, but collections of fruit. The top of the Via Sacra,” I added, “where fruit brings its weight in gold, is a very picture of his orchard.”

[11] While we were speaking they came up, and Stolo inquired: “We haven’t arrived too late for dinner? For I do not see Lucius Fundilius, our host.” “Do not be alarmed,” replied Agrius, “for not only has that egg which shows the last lap of the chariot race at the games in the circus not been taken down, but we have not even seen that other egg which usually heads the procession at dinner. [12] And so, while you and we are waiting to see the latter, and our sacristan is returning, tell us what end agriculture has in view, profit, or pleasure, or both; for we are told that you are now the past-master of agriculture, and that Stolo formerly was.” “First,” remarked Scrofa, “we should determine whether we are to include under agriculture only things planted, or also other things, such as sheep and cattle, which are brought on to the land. [13] For I observe that those who have written on agriculture, whether in Punic, or Greek, or Latin, have wandered too far from the subject.” “For my part,” replied Stolo, “I do not think that they are to be imitated in every respect, but that certain of them have acted wisely in confining the subject to narrower limits, and excluding matters which do not bear directly on this topic. Thus the whole subject of grazing, which many writers include under agriculture, seems to me to concern the herdsman rather than the farmer. [14] For that reason the persons who are placed in charge of the two occupations have different names, one being called vilicus, and the other magister pecoris. The vilicus is appointed for the purpose of tilling the ground, and the name is

derived from villa, the place into which the crops are hauled (vehuntur), and out of which they are hauled by him when they are sold. For this reason the peasants even now call a road voha, because of the hauling; and they call the place to which and from which they haul vella and not villa. In the same way, those who make a living by hauling are said *facere velaturam*.” [15] “Certainly,” said Fundanius, “grazing and agriculture are different things, though akin; just as the right pipe of the tibia is different from the left, but still in a way united, inasmuch as the one is the treble, while the other plays the accompaniment of the same air.” [16] “You may even add this,” said I, “that the shepherd’s life is the treble, and the farmer’s plays the accompaniment, if we may trust that most learned man, Dicaearchus. In his sketch of Greek life from the earliest times, he says that in the primitive period, when people led a pastoral life, they were ignorant even of ploughing, of planting trees, and of pruning, and that agriculture was adopted by them only at a later period. Wherefore the art of agriculture ‘accompanies’ the pastoral because it is subordinate, as the left pipe is to the stops of the right.” [17] “You and your piping,” retorted Agrius, “are not only robbing the master of his flock and the slaves of their peculium — the grazing which their master allows them — but you are even abrogating the homestead laws, among which we find one reciting that the shepherd may not graze a young orchard with the offspring of the she-goat, a race which astrology, too, has placed in the heavens, not far from the Bull.” [18] “Be careful, Agrius,” interrupted Fundanius, “that your citation cannot be wide of the mark; for it is also written in the law, ‘a certain kind of flock.’ For certain kinds of animals are the foes of plants, and even poisonous, such as the goats of which you spoke; for they destroy all young plants by their browsing, and especially vines and olives. [19] Accordingly there arose a custom, from opposite reasons, that a victim from the goat family might be led to the altar of one god, but might not be sacrificed on the altar of another; since, because of the same hatred, the one was not willing to see a goat, while the other was pleased to see him die. So it was that he-goats were offered to father Bacchus, the discoverer of the vine, so that they might pay with their lives for the injuries they do him; while, on the other hand, no member of the goat family was sacrificed to Minerva on account of the olive, because it is said that any olive plant which they bite becomes sterile; for their spittle is poisonous to its fruit. [20] For this reason, also, they are not driven into the acropolis at Athens except once a year, for a necessary sacrifice — to avoid the danger of having the olive tree, which is said to have originated there, touched by a she-goat.” “Cattle are not properly included in a discussion on agriculture,” said I, “except those which enhance the cultivation of the land by their labour, such as those which can plough under the yoke.” [21] “If that is so,” replied Agrasius, “how can cattle be kept off the land, when manure, which enhances its value very greatly, is supplied by the herds?” “By that method of reasoning,” retorted Agrius, “we may assert that slave-trading is a branch of agriculture, if we decide to keep a gang for that purpose. The

error lies in the assumption that, because cattle can be kept on the land and be a source of profit there, they are part of agriculture. It does not follow; for by that reasoning we should have to embrace other things quite foreign to agriculture; as, for instance, you might keep on your farm a number of spinners, weavers, and other artisans.”

“Very well,” said Scrofa, “let us exclude grazing from agriculture, and whatever else anyone wishes.” [22] “Am I, then,” said I, “to follow the writings of the elder and the younger Saserna, and consider that how to manage clay-pits is more related to agriculture than mining for silver or other mining such as undoubtedly is carried out on some land?” [23] But as quarries for stone or sand-pits are not related to agriculture, so too clay-pits. This is not to say that they are not to be worked on land where it is suitable and profitable; as further, for instance, if the farm lies along a road and the site is convenient for travellers, a tavern might be built; however profitable it might be, still it would form no part of agriculture. For it does not follow that whatever profit the owner makes on account of the land, or even on the land, should be credited to the account of agriculture, but only that which, as the result of sowing, is born of the earth for our enjoyment.” [24] “You are jealous of that great writer,” interrupted Stolo, “and you attack his potteries carpingly, while passing over the excellent observations he makes bearing very closely on agriculture, so as not to praise them.” [25] This brought a smile from Scrofa, who knew the books and despised them; and Agrasius, thinking that he alone knew them, asked Stolo to give a quotation. “This is his recipe for killing bugs,” he said: “ ‘Soak a wild cucumber in water, and wherever you sprinkle the water the bugs will not come.’ And again, ‘Grease your bed with ox gall, mixed with vinegar.’ ” [26] “And still it is good advice,” said Fundanius, glancing at Scrofa, “even if he did write it in a book on agriculture.” “Just as good, by Hercules,” he replied, “as this one for the making of a depilatory: ‘Throw a yellow frog into water, boil it down to one-third, and rub the body with it.’ ” “ ‘It would be better for you to quote from that book,” said I, “a passage which bears more closely on the trouble from which Fundanius suffers; for his feet are always hurting him and bringing wrinkles to his brow.” [27] “Tell me, pray,” exclaimed Fundanius; “I would rather hear about my feet than how beet-roots ought to be planted.” “I will tell you,” said Stolo, with a smile, “in the very words in which he wrote it (at least I have heard Tarquenna say that when a man’s feet begin to hurt he may be cured if he will think of you): ‘I am thinking of you, cure my feet. The pain go in the ground, and may my feet be sound.’ He bids you chant this thrice nine times, touch the ground, spit on it, and be fasting while you chant.” [28] “You will find many other marvels in the books of the Sasernas,” said I, “which are all just as far away from agriculture and therefore to be disregarded.” “Just as if,” said he, “such things are not found in other writers also. Why, are there not many such items in the book of the renowned Cato, which he published on the subject of agriculture, such as his recipes for placenta, for libum, and for the salting of

hams?" "You do not mention that famous one of his composing," said Agrius: "If you wish to drink deep at a feast and to have a good appetite, eat some half-dozen leaves of raw cabbage with vinegar before dinner."

[3.1] "Well, then," said Agrasius, "since we have decided the nature of the subjects which are to be excluded from agriculture, tell us whether the knowledge of those things used in agriculture is an art or not, and trace its course from starting-point to goal." Glancing at Scrofa, Stolo said: "You are our superior in age, in position, and in knowledge, so you ought to speak." And he, nothing loath, began: "In the first place, it is not only an art but an important and noble art. It is, as well, a science, which teaches what crops are to be planted in each kind of soil, and what operations are to be carried on, in order that the land may regularly produce the largest crops.

[4.1] "Its elements are the same as those which Ennius says are the elements of the universe — water, earth, air, and fire. You should have some knowledge of these before you cast your seed, which is the first step in all production. Equipped with this knowledge, the farmer should aim at two goals, profit and pleasure; the object of the first is material return, and of the second enjoyment. The profitable plays a more important rôle than the pleasurable; [2] and yet for the most part the methods of cultivation which improve the aspect of the land, such as the planting of fruit and olive trees in rows, make it not only more profitable but also more saleable, and add to the value of the estate. For any man would rather pay more for a piece of land which is attractive than for one of the same value which, though profitable, is unsightly. [3] Further, land which is more wholesome is more valuable, because on it the profit is certain; while, on the other hand, on land that is unwholesome, however rich it may be, misfortune does not permit the farmer to reap a profit. For where the reckoning is with death, not only is the profit uncertain, but also the life of the farmers; so that, lacking wholesomeness, agriculture becomes nothing else than a game of chance, in which the life and the property of the owner are at stake. [4] And yet this risk can be lessened by science; for, granting that healthfulness, being a product of climate and soil, is not in our power but in that of nature, still it depends greatly on us, because we can, by care, lessen the evil effects. For if the farm is unwholesome on account of the nature of the land or the water, from the miasma which is exhaled in some spots; or if, on account of the climate, the land is too hot or the wind is not salubrious, these faults can be alleviated by the science and the outlay of the owner. The situation of the buildings, their size, the exposure of the galleries, the doors, and the windows, are matters of the highest importance. [5] Did not that famous physician, Hippocrates, during a great pestilence save not one farm but many cities by his skill? But why do I cite him? Did not our friend Varro here, when the army and fleet were at Corcyra, and all the houses were crowded with the sick and the dead, by cutting new windows to admit the north wind, and shutting out the infected winds, by changing the position of doors, and other precautions of the same kind, bring back his comrades and

his servants in good health?

[5.1] “But as I have stated the origin and the limits of the science, it remains to determine the number of its divisions.” “Really,” said Agrius, “it seems to me that they are endless, when I read the many books of Theophrastus, those which are entitled ‘The History of Plants’ and ‘The Causes of Vegetation.’” [2] “His books,” replied Stolo, “are not so well adapted to those who wish to tend land as to those who wish to attend the schools of the philosophers; which is not to say that they do not contain matter which is both profitable and of general interest. [3] So, then, do you rather explain to us the divisions of the subject.” “The chief divisions of agriculture are four in number,” resumed Scrofa: “First, a knowledge of the farm, comprising the nature of the soil and its constituents; second, the equipment needed for the operation of the farm in question; third, the operations to be carried out on the place in the way of tilling; and fourth, the proper season for each of these operations. [4] Each of these four general divisions is divided into at least two subdivisions the first comprises questions with regard to the soil as such, and those which pertain to housing and stabling. The second division, comprising the movable equipment which is needed for the cultivation of the farm, is also subdivided into two: the persons who are to do the farming, and the other equipment. The third, which covers operations, is subdivided: the plans to be made for each operation, and where each is to be carried on. The fourth, covering the seasons, is subdivided: those which are determined by the annual revolution of the sun, and those determined by the monthly revolution of the moon. I shall discuss first the four chief divisions, and then the eight subdivisions in more detail.

[6.1] “First, then, with respect to the soil of the farm, four points must be considered: the conformation of the land, the quality of the soil, its extent, and in what way it is naturally protected. As there are two kinds of conformation, the natural and that which is added by cultivation, in the former case one piece of land being naturally good, another naturally bad, and in the latter case one being well tilled, another badly, I shall discuss first the natural conformation. [2] There are, then, with respect to the topography, three simple types of land — plain, hill, and mountain; though there is a fourth type consisting of a combination of these, as, for instance, on a farm which may contain two or three of those named, as may be seen in many places. Of these three simple types, undoubtedly a different system is applicable to the lowlands than to the mountains, because the former are hotter than the latter; and the same is true of hillsides, because they are more temperate than either the plains or the mountains. [3] These qualities are more apparent in broad stretches, when they are uniform; thus the heat is greater where there are broad plains, and hence in Apulia the climate is hotter and more humid, while in mountain regions, as on Vesuvius, the air is lighter and therefore more wholesome. Those who live in the lowlands suffer more in summer; those who live in the uplands suffer more in winter; the same crops are planted

earlier in the spring in the lowlands than in the uplands, and are harvested earlier, while both sowing and reaping come later in the uplands. [4] Certain trees, such as the fir and the pine, flourish best and are sturdiest in the mountains on account of the cold climate, while the poplar and the willow thrive here where the climate is warmer; the arbuté and the oak do better in the upland, the almond and the mariscan fig in the lowlands. On the foothills the growth is nearer akin to that of the plains than to that of the mountains; on the higher hills the opposite is true. [5] Owing to these three types of configuration different crops are planted, grain being considered best adapted to the plains, vines to the hills, and forests to the mountains. Usually the winter is better for those who live in the plains, because at that season the pastures are fresh, and pruning can be carried on in more comfort. On the other hand, the summer is better in the mountains, because there is abundant forage at that time, whereas it is dry in the plains, and the cultivation of the trees is more convenient because of the cooler air. [6] A lowland farm that everywhere slopes regularly in one direction is better than one that is perfectly level, because the latter, having no outlet for the water, tends to become marshy. Even more unfavourable is one that is irregular, because pools are liable to form in the depressions. These points and the like have their differing importance for the cultivation of the three types of configuration."

[7.1] "So far as concerns the natural situation," said Stolo, "it seems to me that Cato was quite right when he said that the best farm was one that was situated at the foot of a mountain, facing south." [2] Scrofa continued: "With regard to the conformation due to cultivation, I maintain that the more regard is had for appearances the greater will be the profits: as, for instance, if those who have orchards plant them in quincunxes, with regular rows and at moderate intervals. Thus our ancestors, on the same amount of land but not so well laid out, made less wine and grain than we do, and of a poorer quality; for plants which are placed exactly where each should be take up less ground and screen each other less from the sun, the moon, and the air. [3] You may prove this by one of several experiments; for instance, a quantity of nuts which you can hold in a modius measure with their shells whole, because the shells naturally keep them compacted, you can scarcely pack into a modius and a half when they are cracked. [4] As to the second point, trees which are planted in a row are warmed by the sun and the moon equally on all sides, with the result that more grapes and olives form, and that they ripen earlier; which double result has the double consequence that they yield more must and oil, and of greater value.

[5] "We come now to the second division of the subject, the type of soil of which the farm is composed. It is in respect of this chiefly that a farm is considered good or bad; for it determines what crops, and of what variety, can be planted and raised on it, as not all crops can be raised with equal success on the same land. As one type is suited to the vine and another to grain, so of others — one is suited to one crop, another to another. [6] Thus near Cortynia,

in Crete, there is said to be a plane tree which does not shed its leaves in winter, and another in Cyprus, according to Theophrastus. Likewise at Sybaris, which is now called Thurii, there is said to be an oak tree of like character, in sight of the town; and that near Elephantine neither the fig nor the vine sheds its leaves — which is quite the opposite of what happens with us. For the same reason there are many trees which bear two crops a year, such as the vine on the coast near Smyrna, and the apple in the district of Consentia. [7] The fact that trees produce more fruit in uncultivated spots, and better fruit under cultivation, proves the same thing. For the same reason there are plants which cannot live except in marshy ground, or actually in the water and not in every kind of water. Some grow in ponds, as the reeds near Reate, others in streams, as the alder trees in Epirus, and still others in the sea, as the palms and squills of which Theophrastus writes. [8] When I was in command of the army in the interior of Transalpine Gaul near the Rhine, I visited a number of spots where neither vines nor olives nor fruit trees grew; where they fertilized the land with a white chalk which they dug; where they had no salt, either mineral or marine, but instead of it used salty coals obtained by burning certain kinds of wood.” [9] “Cato, you know,” interjected Stolo, “in arranging plots according to the degree of existence, formed nine categories: first, land on which vines can bear a large quantity of wine of good quality; second, land suited for a watered garden; third, for an osier bed; fourth, for olives; fifth, for meadows; sixth, for a grain field; seventh, for a wood lot; eighth, for an orchard; ninth, for a mast grove.” [10] “I know he wrote that,” replied Scrofa, “but all authorities do not agree with him on this point. There are some who assign the first place to good meadows, and I am one of them. Hence our ancestors gave the name *prata* to meadow-land as being ready (*parata*). Caesar Vopiscus, once an aedile, in pleading a case before the censors, spoke of the plains of Rosea as the nursing-ground of Italy, such that if a rod were left there overnight, it would be lost the next morning on account of the growth of the grass.

[8.1] “As an argument against the vineyard, there are those who claim that the cost of upkeep swallows up the profits. In my opinion, it depends on the kind of vineyard, for there are several: for some are low-growing and without props, as in Spain; others tall, which are called ‘yoked,’ as generally in Italy. For this latter class there are two names, *pedamenta* and *iuga*: those on which the vine runs vertically are called *pedamenta* (stakes), and those on which it runs transversely are called *iuga* (yokes); and from this comes the name ‘yoked vines.’ [2] Four kinds of ‘yokes’ are usually employed, made respectively of poles, of reeds, of cords, and of vines: the first of these, for example, around Falernum, the second around Arpi, the third around Brundisium, the fourth around Mediolanum. There are two forms of this trellising: in straight lines, as in the district of Canusium, or yoked lengthways and sideways in the form of the *compluvium*, as is the practice generally in Italy. If the material grows on the place the vineyard does not mind the

expense; and it is not burdensome if much of it can be obtained in the neighbourhood. [3] The first class I have named requires chiefly a willow thicket, the second a reed thicket, the third a rush bed or some material of the kind. For the fourth you must have an arbustum, where trellises can be made of the vines, as the people of Mediolanum do on the trees which they call opuli (maples), and the Canusians on lattice-work in fig trees. [4] Likewise, there are, as a rule, four types of props. The best for common use in the vineyard is a stout post, called ridica, made of oak or juniper. The second best is a stake made from a branch, and preferably from a tough one, so that it will last longer; when one end has rotted in the ground the stake is reversed, what had been the top becoming the bottom. The third, which is used only as a substitute when the others are lacking, is formed of reeds; bundles of these, tied together with bark, are planted in what they call cuspides, earthenware pipes with open bottoms so that the casual water can run out. The fourth is the natural prop, where the vineyard is formed of vines growing across from tree to tree; such traverses are called by some rumpi. [5] The limit to the height of the vineyard is the height of a man, and the intervals between the props should be sufficient to allow a yoke of oxen to plough between. The most economical type of vineyard is that which furnishes wine to beaker without the aid of trellises. There are two kinds of these: one in which the ground serves as a bed for the grapes, as in many parts of Asia. The foxes often share the harvest with man in such vineyards, and if the land breeds mice the yield is cut short unless you fill the whole vineyard with traps, as they do in the island Pandateria. [6] In the other type only those branches are raised from the ground which give promise of producing fruit. These are propped on forked sticks about two feet long, at the time when the grapes form, so that they may not wait until the harvest is over to learn to hang in a bunch by means of a string or the fastening which our fathers called a cestus. In such a vineyard, as soon as the master sees the back of the vintager he takes his forks back to hibernate under cover so that he may be able to enjoy their assistance without cost the next year. In Italy the people of Reate practise this custom. [7] This variation in culture is caused chiefly by the fact that the nature of the soil makes a great difference; where this is naturally humid the vine must be trained higher, because while the wine is forming and ripening it does not need water, as it does in the cup, but sun. And that is the chief reason, I think, that the vines climb up trees.

[9.1] “The nature of the soil, I say, makes a great difference, in determining to what it is or is not adapted. The word terra is used in three senses, the general, the specific, and the mixed. It is used in the general sense when we speak of the orbis terrae, or of the terra of Italy or any other country; for in that designation are included rock, and sand, and other such things. The word is used specifically in the second sense when it is employed without the addition of a qualifying word or epithet. [2] It is used in the third or mixed sense, of the element in which seed can be planted and germinate — such as

clay soil, rocky soil, etc. In this last sense of the word there are as many varieties of earth as when it is used in the general sense, on account of the different combinations of substances. For there are many substances in the soil, varying in consistency and strength, such as rock, marble, rubble, sand, loam, clay, red ochre, dust, chalk, ash, carbuncle (that is, when the ground becomes so hot from the sun that it chars the roots of plants); [3] and soil, using the word in its specific sense, is called chalky or . . . according as one of these elements predominates — and so of other types of soil. The classes of these vary in such a way that there are, besides other subdivisions, at least three for each type: rocky soil, for instance, may be very rocky, or moderately rocky, or almost free of rocks, and in the case of other varieties of mixed soil the same three grades are distinguished. [4] And further, each of these three grades contains three grades: one may be very wet, one very dry, one intermediate. And these distinctions are not without the greatest importance for the crops; thus the intelligent farmer plants spelt rather than wheat on wet land, and on the other hand barley rather than spelt on dry land, while he plants either on the intermediate. [5] Furthermore, even finer distinctions are made in all these classes, as, for instance, in loamy soil it makes a difference whether the loam be white or red, as the whitish loam is not suited to nurseries, while the reddish is well adapted. Thus there are three chief distinctions in soil, according as it is poor, rich, or medium; the rich being able to produce many kinds of vegetation, and the poor quite the opposite. In thin soil, as, for instance, in Pupinia, you see no sturdy trees, nor vigorous vines, nor stout straw, nor mariscan figs, and most of the trees are covered with moss, as are the parched meadows. [6] On the other hand, in rich soil, like that in Etruria, you can see rich crops, land that can be worked steadily, sturdy trees, and no moss anywhere. In the case of medium soil, however, such as that near Tibur, the nearer it comes to not being thin than to being sterile, the more it is suited to all kinds of growth than if it inclined to the poorer type.” [7] “Diophanes of Bithynia makes a good point,” remarked Stolo, “when he writes that you can judge whether land is fit for cultivation or not, either from the soil itself or from the vegetation growing on it: from the soil according as it is white or black, light and crumbling easily when it is dug, of a consistency not ashy and not excessively heavy; from the wild vegetation growing on it if it is luxuriant and bearing abundantly its natural products. But proceed to your third topic, that of measurement.”

[10.1] Scrofa resumed: “Each country has its own method of measuring land. Thus in farther Spain the unit of measure is the iugum, in Campania the versus, with us here in the district of Rome and in Latium the iugerum. The iugum is the amount of land which a yoke of oxen can plough in a day; the versus is an area 100 feet square; [2] the iugerum an area containing two square actus. The square actus, which is an area 120 feet in each direction, is called in Latin acnua. The smallest section of the iugerum, an area ten feet square, is called a scripulum; and hence surveyors sometimes speak of the odd fractions

of land above the iugerum as an uncia or a sextans, or the like; for the iugerum contains 288 scripula, which was the weight of the old pound before the Punic War. Two iugera form a haeredium, from the fact that this amount was said to have been first allotted to each citizen by Romulus, as the amount that could be transmitted by will. Later on 100 haeredia were called a centuria; this is a square area, each side being 2400 feet long. Further, four such centuriae, united in such a way that there are two on each side, are called a saltus in the distribution of public lands.

[11.1] “Many errors result from the failure to observe the measurement of the farm, some building a steading smaller and some larger than the dimensions demand — each of which is prejudicial to the estate and its revenue. For buildings which are too large cost us too much for construction and require too great a sum for upkeep; and if they are smaller than the farm requires the products are usually ruined. [2] There is no doubt, for instance, that a larger wine cellar should be built on an estate where there is a vineyard, and larger granaries if it is a grain farm.

“The steading should be so built that it will have water, if possible, within the enclosure, or at least very near by. The best arrangement is to have a spring on the place, or, failing this, a perennial stream. If no running water is available, cisterns should be built under cover and a reservoir in the open, the one for the use of people and the other for cattle.

[12.1] “Especial care should be taken, in locating the steading, to place it at the foot of a wooded hill, where there are broad pastures, and so as to be exposed to the most healthful winds that blow in the region. A steading facing the east has the best situation, as it has the shade in summer and the sun in winter. If you are forced to build on the bank of a river, be careful not to let the steading face the river, as it will be extremely cold in winter, and unwholesome in summer. [2] Precautions must also be taken in the neighbourhood of swamps, both for the reasons given, and because there are bred certain minute creatures which cannot be seen by the eyes, which float in the air and enter the body through the mouth and nose and there cause serious diseases.” “What can I do,” asked Fundanius, “to prevent disease if I should inherit a farm of that kind?” “Even I can answer that question,” replied Agrius; “sell it for the highest cash price; or if you can’t sell it, abandon it.” [3] Scrofa, however, replied: “See that the steading does not face in the direction from which the infected wind usually comes, and do not build in a hollow, but rather on elevated ground, as a well-ventilated place is more easily cleared if anything obnoxious is brought in. Furthermore, being exposed to the sun during the whole day, it is more wholesome, as any animalculae which are bred near by and brought in are either blown away or quickly die from the lack of humidity. [4] Sudden rains and swollen streams are dangerous to those who have their buildings in low-lying depressions, as are also the sudden raids of robber bands, who can more easily take advantage of those who are off their guard. Against both these dangers the more elevated situations are safer.

[13.1] "In laying out the steadings, you should arrange the stables so that the cow-stalls will be at the place which will be warmest in winter. Such liquid products as wine and oil should be set away in store-rooms on level ground, and jars for oil and wine should be provided; while dry products, such as beans and hay, should be stored in a floored space. A place should be provided for the hands to stay in when they are tired from work or from cold or heat, where they can recover in comfort. [2] The overseer's room should be next to the entrance, where he can know who comes in or goes out at night and what he takes; and especially if there is no porter. Especially should care be taken that the kitchen be conveniently placed, because there in winter there is a great deal going on before daylight, in the preparation and eating of food. Sheds of sufficient size should also be provided in the barnyard for the carts and all other implements which are injured by rain; for if these are kept in an enclosure inside the walls, but in the open, they will not have to fear thieves, yet they will be exposed to injurious weather. [3] On a large farm it is better to have two farm-yards: one, containing an outdoor reservoir — a pond with running water, which, surrounded by columns, if you like, will form a sort of fish-pond; for here the cattle will drink, and here they will bathe themselves when brought in from ploughing in the summer, not to mention the geese and hogs and pigs when they come from pasture; and in the outer yard there should be a pond for the soaking of lupines and other products which are rendered more fit for use by being immersed in water. [4] As the outer yard is often covered with chaff and straw trampled by the cattle, it becomes the handmaid of the farm because of what is cleaned off it. Hard by the steadings there should be two manure pits, or one pit divided into two parts; into one part should be cast the fresh manure and from the other the rotted manure should be hauled into the field; for manure is not so good when it is put in fresh as when it is well rotted. The best type of manure pit is that in which the top and sides are protected from the sun by branches and leaves; for the sun ought not to dry out the essence which the land needs. It is for this reason that experienced farmers arrange it, when possible, so that water will collect there, for in this way the strength is best retained; and some people place the privies for the servants on it. [5] You should build a shed large enough to store the whole yield of the farm under cover. This shed, which is sometimes called a nubilarium, should be built hard by the floor on which you are to thresh the grain; it should be of a size proportioned to that of the farm, and open only on one side, that next to the threshing floor, so that you can easily throw out the grain for threshing, and quickly throw it back again, if it begins to 'get cloudy.' You should have windows on the side from which it can be ventilated most easily." [6] "A farm is undoubtedly more profitable, so far as the buildings are concerned," said Fundanius, "if you construct them more according to the thrift of the ancients than the luxury of the moderns; for the former built to suit the size of their crops, while the latter build to suit their unbridled luxury. Hence their farms cost more than their dwelling-houses,

while now the opposite is usually the case. In those days a steading was praised if it had a good kitchen, roomy stables, and cellars for wine and oil in proportion to the size of the farm, with a floor sloping to a reservoir, because often, after the new wine is laid by, not only the butts which they use in Spain but also the jars which are used in Italy are burst by the fermentation of the must. [7] In like manner they took care that the steading should have everything else that was required for agriculture; while in these times, on the other hand, the effort is to have as large and handsome a dwelling-house as possible; and they vie with the 'farm houses' of Metellus and Lucullus, which they have built to the great damage of the state. What men of our day aim at is to have their summer dining-rooms face the cool east and their winter dining-rooms face the west, rather than, as the ancients did, to see on what side the wine and oil cellars have their windows; for in a cellar wine requires cooler air on the jars, while oil requires warmer. Likewise you should see that, if there be a hill, the house, unless something prevents, should be placed there by preference."

[14.1] "Now I shall speak of the enclosures which are constructed for the protection of the farm as a whole, or its divisions. There are four types of such defences: the natural, the rustic, the military, and the masonry type; and each of these types has several varieties. The first type, the natural, is a hedge, usually planted with brush or thorn, having roots and being alive, and so with nothing to fear from the flaming torch of a mischievous passer-by. [2] The second type, the rustic, is made of wood, but is not alive. It is built either of stakes planted close and intertwined with brush; or of thick posts with holes bored through, having rails, usually two or three to the panel, thrust into the openings; or of trimmed trees placed end to end, with the branches driven into the ground. The third, or military type, is a trench and bank of earth; but the trench is adequate only if it can hold all the rain water, or has a slope sufficient to enable it to drain the water off the land. [3] The bank is serviceable which is close to the ditch on the inside, or so steep that it is not easy to climb. This type of enclosure is usually built along public roads and along streams. At several points along the Via Salaria, in the district of Crustumeria, one may see banks combined with trenches to prevent the river from injuring the fields. Banks built without trenches, such as occur in the district of Reate, are sometimes called walls. [4] The fourth and last type of fence, that of masonry, is a wall, and there are usually four varieties: that which is built of stone, such as occurs in the district of Tusculum; that of burned brick, such as occurs in the Ager Gallicus; that of sun-dried brick, such as occurs in the Sabine country; and that formed of earth and gravel in mounds, such as occurs in Spain and the district of Tarentum.

[15.1] "Furthermore, if there are no enclosures, the boundaries of the estate are made more secure by the planting of trees, which prevent the servants from quarrelling with the neighbours, and make it unnecessary to fix the boundaries by lawsuits. Some plant pines around the edges, as my wife has

done on her Sabine farms; others plant cypresses, as I did on my place on Vesuvius; and still others plant elms, as many have done near Crustumeria. Where that is possible, as it is there because it is a plain, there is no tree better for planting; it is extremely profitable, as it often supports and gathers many a basket of grapes, yields a most agreeable foliage for sheep and cattle, and furnishes rails for fencing, and wood for hearth and furnace.

“These points, then, which I have discussed,” continued Scrofa, “are the four which are to be observed by the farmer: the topography of the land, the nature of the soil, the size of the plot, and the protection of the boundaries.

[16.1] “It remains to discuss the second topic, the conditions surrounding the farm, for they too vitally concern agriculture because of their relation to it. These considerations are the same in number: whether the neighbourhood is unsafe; whether it is such that it is not profitable to transport our products to it, or to bring back from it what we need; third, whether roads or streams for transportation are either wanting or inadequate; and fourth, whether conditions on the neighbouring farms are such as to benefit or injure our land.

[2] Taking up the first of the four: the safety or lack of safety of the neighbourhood is important; for there are many excellent farms which it is not advisable to cultivate because of the brigandage in the neighbourhood, as in Sardinia certain farms near . . . , and in Spain on the borders of Lusitania. Farms which have near by suitable means of transporting their products to market and convenient means of transporting thence those things needed on the farm, are for that reason profitable. For many have among their holdings some into which grain or wine or the like which they lack must be brought, and on the other hand not a few have those from which a surplus must be sent away. [3] And so it is profitable near a city to have gardens on a large scale; for instance, of violets and roses and many other products for which there is a demand in the city; while it would not be profitable to raise the same products on a distant farm where there is no market to which its products can be carried. Again, if there are towns or villages in the neighbourhood, or even well-furnished lands and farmsteads of rich owners, from which you can purchase at a reasonable price what you need for the farm, and to which you can sell your surplus, such as props, or poles, or reeds, the farm will be more profitable than if they must be fetched from a distance; sometimes, in fact, more so than if you can supply them yourself by raising them on your own place. [4] For this reason farmers in such circumstances prefer to have in their neighbourhood men whose services they can call upon under a yearly contract — physicians, fullers, and other artisans — rather than to have such men of their own on the farm; for sometimes the death of one artisan wipes out the profit of a farm. This department of a great estate rich owners are wont to entrust to their own people; for if towns or villages are too far away from the estate, they supply themselves with smiths and other necessary artisans to keep on the place, so that their farm hands may not leave their work and lounge around holiday-making on working days, rather than make the farm

more profitable by attending to their duties. [5] It is for this reason, therefore, that Saserna's book lays down the rule that no person shall leave the farm except the overseer, the butler, and one person whom the overseer may designate; if one leaves against this rule he shall not go unpunished, and if he does, the overseer shall be punished. The rule should rather be stated thus: that no one shall leave the farm without the direction of the overseer, nor the overseer without the direction of the master, on an errand which will prevent his return this day, and that no oftener than is necessary for the farm business.

[6] A farm is rendered more profitable by convenience of transportation: if there are roads on which carts can easily be driven, or navigable rivers near by. We know that transportation to and from many farms is carried on by both these methods. The manner in which your neighbour keeps the land on the boundary planted is also of importance to your profits. For instance, if he has an oak grove near the boundary, you cannot well plant olives along such a forest; for it is so hostile in its nature that your trees will not only be less productive, but will actually bend so far away as to lean inward toward the ground, as the vine is wont to do when planted near the cabbage. As the oak, so large numbers of large walnut trees close by render the border of the farm sterile.

[17.1] "I have now discussed the four divisions of the estate which are concerned with the soil, and the second four, which are exterior to the soil but concern its cultivation; now I turn to the means by which land is tilled. Some divide these into two parts: men, and those aids to men without which they cannot cultivate; others into three: the class of instruments which is articulate, the inarticulate, and the mute; the articulate comprising the slaves, the inarticulate comprising the cattle, and the mute comprising the vehicles. [2] All agriculture is carried on by men — slaves, or freemen, or both; by freemen, when they till the ground themselves, as many poor people do with the help of their families; or hired hands, when the heavier farm operations, such as the vintage and the haying, are carried on by the hiring of freemen; and those whom our people called *obaerarii* and of whom there are still many in Asia, in Egypt, and in Illyricum. [3] With regard to these in general this is my opinion: it is more profitable to work unwholesome lands with hired hands than with slaves; and even in wholesome places it is more profitable thus to carry out the heavier farm operations, such as storing the products of the vintage or harvest. As to the character of such hands Cassius gives this advice: that such hands should be selected as can bear heavy work, are not less than twenty-two years old, and show some aptitude for farm labour. You may judge of this by the way they carry out their other orders, and, in the case of new hands, by asking one of them what they were in the habit of doing for their former master.

"Slaves should be neither cowed nor high-spirited. [4] They ought to have men over them who know how to read and write and have some little education, who are dependable and older than the hands whom I have

mentioned; for they will be more respectful to these than to men who are younger. Furthermore, it is especially important that the foremen be men who are experienced in farm operations; for the foreman must not only give orders but also take part in the work, so that his subordinates may follow his example, and also understand that there is good reason for his being over them — the fact that he is superior to them in knowledge. [5] They are not to be allowed to control their men with whips rather than with words, if only you can achieve the same result. Avoid having too many slaves of the same nation, for this is a fertile source of domestic quarrels. The foremen are to be made more zealous by rewards, and care must be taken that they have a bit of property of their own, and mates from among their fellow-slaves to bear them children; for by this means they are made more steady and more attached to the place. Thus, it is on account of such relationships that slave families of Epirus have the best reputation and bring the highest prices. [6] The good will of the foremen should be won by treating them with some degree of consideration; and those of the hands who excel the others should also be consulted as to the work to be done. When this is done they are less inclined to think that they are looked down upon, and rather think that they are held in some esteem by the master. [7] They are made to take more interest in their work by being treated more liberally in respect either of food, or of more clothing, or of exemption from work, or of permission to graze some cattle of their own on the farm, or other things of this kind; so that, if some unusually heavy task is imposed, or punishment inflicted on them in some way, their loyalty and kindly feeling to the master may be restored by the consolation derived from such measures.

[18.1] “With regard to the number of slaves required, Cato has in view two bases of calculation: the size of the place, and the nature of the crop grown. Writing of oliveyards and vineyards, he gives two formulas. The first is one in which he shows how an oliveyard of 240 iugera should be equipped; on a place of this size he says that the following thirteen slaves should be kept: an overseer, a housekeeper, five labourers, three teamsters, one muleteer, one swineherd, one shepherd. The second he gives for a vineyard of 100 iugera, on which he says should be kept the following fifteen slaves: an overseer, a housekeeper, ten labourers, a teamster, a muleteer, a swineherd. [2] Saserna states that one man is enough for eight iugera, and that he ought to dig over that amount in forty-five days, although he can dig over a single iugerum with four days’ work; but he says that he allows thirteen days extra for such things as illness, bad weather, idleness, and laxness. [3] Neither of these writers has left us a very clearly expressed rule. For if Cato wished to do this, he should have stated it in such a way that we add or subtract from the number proportionately as the farm is larger or smaller. Further, he should have named the overseer and the housekeeper outside of the number of slaves; for if you cultivate less than 240 iugera of olives you cannot get along with less than one overseer, nor if you cultivate twice as large a place or more will you have to

keep two or three overseers. [4] It is only the labourers and teamsters that are to be added proportionately to larger bodies of land; and even then only if the land is uniform. But if it is so varied that it cannot all be ploughed, as, for instance, if it is very broken or very steep, fewer oxen and teamsters will be needed. I pass over the fact that the 240 iugera instanced is a plot which is neither a unit nor standard (the standard unit is the century, containing 200 iugera); [5] when one-sixth, or 40 iugera, is deducted from this 240, I do not see how, according to his rule, I shall take one-sixth also from thirteen slaves, or, if I leave out the overseer and the housekeeper, how I shall take one-sixth from the eleven. As to his saying that on 100 iugera of vineyard you should have fifteen slaves; if one has a century, half vineyard and half oliveyard, it will follow that he should have two overseers and two housekeepers, which is absurd. [6] Wherefore the proper number and variety of slaves must be determined by another method, and Saserna is more to be approved in this matter; he says that each iugerum is enough to furnish four days' work for one hand. But if this applied to Saserna's farm in Gaul, it does not necessarily follow that the same would hold good for a farm in the mountains of Liguria. Therefore you will most accurately determine the number of slaves and other equipment which you should provide [7] if you observe three things carefully: the character of the farms in the neighbourhood and their size; the number of hands employed on each; and how many hands should be added or subtracted in order to keep your cultivation better or worse. For nature has given us two routes to agriculture, experiment and imitation. The most ancient farmers determined many of the practices by experiment, their descendants for the most part by imitation. [8] We ought to do both — imitate others and attempt by experiment to do some things in a different way, following not chance but some system: as, for instance, if we plough a second time, more or less deeply than others, to see what effect this will have. This was the method they followed in weeding a second and third time, and those who put off the grafting of figs from spring-time to summer.

[19.1] "With regard to the second division of equipment, to which I have given the name of inarticulate, Saserna says that two yoke of oxen are enough for 200 iugera of cultivated land, while Cato states that three yoke are needed for 240 iugera of olive-yard. Hence, if Saserna is right, one yoke is needed for every 100 iugera; if Cato is right, one of every 80. My own opinion is that neither of these standards will fit every piece of land, and that each will fit some particular piece. One piece, for instance, may be easier or harder to work than another, [2] and there are places which oxen cannot break unless they are unusually powerful, and frequently they leave the plough in the field with broken beam. Wherefore on each farm, so long as we are unacquainted with it, we should follow a threefold guide: the practice of the former owner, the practice of neighbouring owners, and a degree of experimentation. [3] As to his addition of three donkeys to haul manure and one for the mill (for a vineyard of 100 iugera, a yoke of oxen, a pair of donkeys, and one for the

mill); under this head of inarticulate equipment it is to be added that of other animals only those that are to be kept which are of service in agriculture, and the few which are usually allowed as the private property of the slaves for their more comfortable support and to make them more diligent in their work. Of such animals, not only owners who have meadows prefer to keep sheep rather than swine because of their manure, but also those who keep animals for other reasons than the benefit of the meadows. As to dogs, they must be kept as a matter of course, for no farm is safe without them.

[20.1] “The first consideration, then, in the matter of quadrupeds, is the proper kind of ox to be purchased for ploughing. You should purchase them unbroken, not less than three years old and not more than four; they should be powerful and equally matched, so that the stronger will not exhaust the weaker when they work together; they should have large horns, black for choice, a broad face, flat nose, deep chest, and heavy quarters. [2] Oxen that have reached maturity on level ground should not be bought for rough and mountainous country; moreover, if the opposite happens to be the case, it should be avoided. When you have bought young steers, if you will fasten forked sticks loosely around their necks and give them food, within a few days they will grow gentle and fit for breaking to the plough. This breaking should consist in letting them grow accustomed to the work gradually, in yoking the raw ox to a broken one (for the training by imitation is easier), and in driving them first on level ground without a plough, then with a light one, and at first in sandy or rather light soil. [3] Draught cattle should be trained in a similar way, first drawing an empty cart, and if possible through a village or town. The constant noise and the variety of objects, by frequent repetition, accustom them to their work. The ox which you have put on the right should not remain continuously on that side, because if he is changed in turn to the left, he finds rest by working on alternate sides. [4] In light soils, as in Campania, the ploughing is done, not with heavy steers, but with cows or donkeys; and hence they can more easily be adapted to a light plough or a mill, and to doing the ordinary hauling of the farm. For this purpose some employ donkeys, others cows or mules, according to the fodder available; for a donkey requires less feed than a cow, but the latter is more profitable. [5] In this matter the farmer must keep in mind the conformation of his land; in broken and heavy land stronger animals must be got, and preferably those which, while doing the same amount of work, can themselves return some profit.

[21.1] “As to dogs, you should keep a few active ones of good traits rather than a pack, and train them rather to keep watch at night and sleep indoors during the day. With regard to unbroken animals and flocks; if the owner has meadow-lands on the farm and no cattle, the best practice is, after selling the forage, to feed and fold the flocks of a neighbour on the farm.

[22.1] “With regard to the rest of the equipment— ‘the mute’, a term which includes baskets, jars, and the like — the following rules may be laid down:

nothing should be bought which can be raised on the place or made by men on the farm, in general articles which are made of withes and of wood, such as hampers, baskets, threshing-sledges, fans, and rakes; so too articles which are made of hemp, flax, rush, palm fibre, and bulrush, such as ropes, cordages, and mats. [2] Articles which cannot be got from the place, if purchased with a view to utility rather than for show, will not cut too deeply into the profits; and the more so if care is taken to buy them where they can be had of good quality, near by and at the same lowest price. The several kinds of such equipment and their number are determined by the size of the place, more being needed if the farm is extensive. [3] Accordingly,” said Stolo, “under this head Cato, fixing a definite size for his farm, writes that one who had under cultivation 240 iugera of olive land should equip it by assembling five complete sets of oil-pressing equipment; and he itemizes such equipment, as, copper kettles, pots, a pitcher with three spouts, and so forth; then implements made of wood and iron, as three large carts, six ploughs and ploughshares, four manure hampers, and so forth; then the kind and number of iron tools needed, as eight forks, as many hoes, half as many shovels, and so forth. [4] He likewise gives a second schedule for a vineyard, in which he writes that if it be one of 100 iugera it should have three complete pressing equipments, vats and covers to hold 800 cullei, twenty grape hampers, twenty grain hampers, and other like implements. Other authorities, it is true, give smaller numbers, but I imagine he fixed the number of cullei so high in order that the farmer might not be forced to sell his wine every year; for old wine brings a better price than new, and the same wine a better price at one time than at another. [5] He likewise says much of the several kinds of tools, giving the kind and number needed, such as hooks, shovels, harrows, and so forth; some classes of which have several subdivisions, such as the hooks — thus the same author says there will be needed forty pruning-hooks for vines, five for rushes, three for trees, ten for brambles.” So far Stolo; [6] and Scrofa resumed: “The master should keep, both in town and on the place, a complete inventory of tools and equipment of the farm, while the overseer on the place should keep all tools stored near the steading, each in its own place. Those that cannot be kept under lock and key he should manage to keep in sight so far as possible, and especially those that are used only at intervals; for instance, the implements which are used at vintage, such as baskets and the like; for articles which are seen every day run less risk from the thief.”

[23.1] Agrasius remarked: “And since we have the first two of the fourfold division, the farm and the equipment with which it is usually worked, I am waiting for the third topic.” “Since I hold,” continued Scrofa, “that the profit of the farm is that which arises from it as the result of planting for a useful purpose, two items are to be considered: what it is most expedient to plant and in what place. For some spots are suited to hay, some to grain, others to vines, others to olive, and so of forage crops, including clover, mixed forage, vetch, alfalfa, snail clover, and lupines. [2] It is not good practice to plant every kind

of crop on rich soil, nor to plant nothing on poor soil; for it is better to plant in thinner soil those crops which do not need much nutriment, such as clover and the legumes, except the chick pea, which is also a legume, as are all those plants which are pulled from the ground and not mowed, and are called legumes from the fact that they are ‘gathered’ (leguntur) in this way. In rich soil it is better to plant those requiring more food, as cabbage, wheat, winter wheat, and flax. [3] Some crops are also to be planted not so much for the immediate return as with a view to the year later, as when cut down and left on the ground they enrich it. Thus, it is customary to plough under lupines as they begin to pod — and sometimes field beans before the pods have formed so far that it is profitable to harvest the beans — in place of dung, if the soil is rather thin. [4] And also in planting selection should be made of those things which are profitable for the pleasure they afford, such as those plots which are called orchards and flower gardens, and also of those which do not contribute either to the sustenance of man or to the pleasure of his senses, but are not without value to the farm. So a suitable place is to be chosen for planting a willow bed and a reed thicket, [5] together with other plants which prefer humid ground; and on the other hand places best suited for planting grain crops, beans, and other plants which like dry ground. Similarly, you should plant some crops in shady spots, as, for instance, the wild asparagus, because the asparagus prefers that type; while sunny ground should be chosen for planting violets and laying out gardens, as these flourish in the sun, and so forth. In still another place should be planted thickets, so that you may have withes with which to weave such articles as wicker wagon bodies, winnowing baskets, and hampers; and in another plant and tend a wood-lot, [6] in another a wood for fowling; and have a place for hemp, flax, rush, and Spanish broom, from which to make shoes for cattle, thread, cord, and rope. Some places are suitable at the same time for the planting of other crops; thus in young orchards, when the seedlings have been planted and the young trees have been set in rows, during the early years before the roots have spread very far, some plant garden crops, and others plant other crops; but they do not do this after the trees have gained strength, for fear of injuring the roots.”

[24.1] “What Cato says about planting,” said Stolo, “is very much to the point on this subject: ‘Soil that is heavy, rich, and treeless should be used for grain; and the same soil, if subject to fogs, should preferably be planted in rape, turnips, millet, and panic-grass. In heavy, warm soil plant olives — those for pickling, the long variety, the Sallentine, the orcites, the posea, the Sergian, the Colminian, and the waxy; choose especially the varieties which are commonly agreed to be the best for these districts. Land which is suitable for olive planting is that which faces the west and is exposed to the sun; no other will be good. [2] In colder and thinner soil the Licinian olive should be planted. If you plant it in rich or warm soil the yield will be worthless, the tree will exhaust itself in bearing, and a reddish scale will injure it.’ [3] A hostus is what they call the yield of oil from one factus; and a factus (‘making’) is the

amount they make up at one time. Some say this is 160 modii, others reduce it so far as 120 modii, according to the number and size of the equipment they have for making it. As to Cato's remark that elms and poplars should be planted around the farm to supply leaves for sheep and cattle, and timber (but this is not necessary on all farms, and where it is necessary it is not chiefly for the forage), they may safely be planted on the northern edge, because there they do not cut off the sun."

[4] Scrofa gave the following advice from the same author: " 'Wherever there is wet ground, poplar cuttings and a reed thicket should be planted. The ground should first be turned with the mattock and then the eyes of the reed should be planted three feet apart; . . . the same cultivation is adapted pretty much to each. The Greek willow should be planted along the border of the thicket, so that you may have withes for tying up vines.

[25.1] 'Soil for laying out a vineyard should be chosen by the following rules: In soil which is best adapted for grapes and which is exposed to the sun the small Aminnian, the double eugeneum, and the small parti-coloured should be planted; in soil that is heavy or more subject to fogs the large Aminnian, the Murgentian, the Apician, and the Lucanian. The other varieties, and especially the hybrids, grow well anywhere.'

[26.1] "In every vineyard they are careful to see that the vine is protected toward the north by the prop; and if they plant live cypresses to serve as props they plant them in alternate rows, yet do not allow the rows to grow higher than the props, and are careful not to plant vines near them, because they are hostile to each other."

"I am afraid," remarked Agrius to Fundanius, "that the sacristan will come back before our friend comes to the fourth act; for I am awaiting the vintage." "Be of good cheer," replied Scrofa, "and get ready the baskets and jar."

[27.1] "And since we have two measures of time, one annual which the sun bounds by its circuit, the other monthly which the moon embraces as it circles, I shall speak first of the sun. Its annual course is divided first into four periods of about three months each up to its completion, and more narrowly into eight periods of a month and a half each; the fourfold division embraces spring, summer, autumn, and winter. [2] For the spring plantings the untilled ground should be broken up so that the weeds which have sprung from it may be rooted up before any seed falls from them; and at the same time, when the clods have been thoroughly dried by the sun, to make them more accessible to the rain and easier to work when they have been thus broken up; and there should be not less than two ploughings, and preferably three. [3] In summer the grain should be gathered, and in autumn, when the weather is dry, the grapes; and this is the best time for the woods to be cleared, the trees being cut close to the ground, while the roots should be dug out at the time of the early rains, so that they cannot sprout again. In winter trees should be pruned, provided it is done when the bark is free from the chill of rain and ice.

[28.1] "The first day of spring occurs [when the sun is] in Aquarius, that of

summer when it is in Taurus, of autumn when it is in Leo, of winter when it is in Scorpio. As the twenty-third day of each one of these four signs is the first day of the four seasons, this makes spring contain 91 days, summer 94, autumn 91, winter 89, which numbers, reduced to the official calendar now in force, fix the beginning of spring on February 7, of summer on May 9, of autumn on August 11, of winter on November 10. [2] But in the more exact divisions certain things are to be taken into account, which cause an eightfold division: the first from the rising of the west wind to the vernal equinox, 45 days, thence to the rising of the Pleiades 44 days, thence to the solstice 48 days, thence to the rising of the Dog Star 27 days, thence to the autumnal equinox 67 days, from there to the setting of the Pleiades 32 days, hence to the winter solstice 57 days, and back to the rising of the west wind 45 days.

[29.1] “These are things which should be done in the first period, from the rising of the west wind to the vernal equinox: — All kinds of nurseries should be set out, orchards pruned, meadows manured, vines trenched and outcropping roots removed, meadows cleared, willow beds planted, grain-land weeded. The word *seges* is used of ploughed land which has been sowed, *arvum* of ploughed land not yet sowed, *novalis* of land where there has been a crop before it is “renewed” (*novatur*) by a second ploughing. [2] When they plough the first time they say they are ‘breaking up,’ the second time that they are ‘breaking down,’ because at the first ploughing large clods are usually turned up, and when the ploughing is repeated they call it ‘breaking down.’ When they plough the third time, after the seed has been broadcast, the oxen are said to ‘ridge’; that is, with mould boards attached to the ploughshare they both cover the broadcast seed in ridges, and at the same time cut ditches to let the rain-water drain off. Some farmers, who have fields which are not very large, as in Apulia and farms of that kind, have the custom later on of breaking up with hoes any large clods which have been left on the ridges. [3] Where the plough makes a hollow or channel with the share, it is called a ‘furrow.’ The space between two furrows, the raised dirt, is called *porca*, because that part of the field presents (*porricit*) the grain; so they also used to employ the word *porricere* when they offered the entrails to the gods.

[30.1] “In the second period, between the vernal equinox and the rising of the Pleiades, these operations should be carried out: — Crops should be weeded, that is, the grass cleared from the crops, oxen should break up the ground, willows should be cut, and meadows fenced. What should have been done in the former period but was not completed should be done before the plants begin to bud and flower, because if those which are deciduous once begin to frond, they are at once unsuited for planting. Olives should be planted and pruned.

[31.1] “In the third period, between the rising of the Pleiades and the solstice, these operations should be carried out: — Digging or ploughing the young vines and then forking them, that is, breaking the ground so that there will be no clods. This is called *occare* because they crush (*occidunt*) the ground. The

vines should be thinned (for that is better than pruning), but by an expert, and this should be done not in the orchard but in the vineyard. [2] Thinning consists in leaving the first and second, sometimes even the third of the strongest shoots with spring from the stock and picking off the rest, lest the stock be not strong enough to furnish sap to the shoots if all are left. For that reason, in the vine-nursery when the vine first comes out, it is the practice for the whole to be cut back, so that it may come from the ground with a sturdier stock and have greater strength in sending out shoots. [3] For a slender stock, on account of weakness, is sterile and cannot put out the vine, which, when it is smaller, they call *flagellum*, while the larger from which the grapes spring they call *palma*. The first word by the change of one letter is derived from *flatus*, the blowing of the wind, so that they call it *flagellum* instead of *flabellum*. The second word seems at first to have been called *parilema*, from *parere*, to bear, because the shoot is sent out to bear grapes; [4] thence, by change of letters, as in many words, it got to be called *palma*. On the other side, it bears a *tendrill*; this is a vine twig twisted like a curl. It is by means of these tendrils that the vine holds the support on which it creeps to grasp a place, from which grasping (*capere*) it is called *capreolus*. All fodder crops should be cut, first clover, mixed fodder, and vetch, and last hay. *Ocinum* is derived, as is the garden clover (*ocimum*), from the Greek word ὀκέως, which means ‘quickly.’ It is called *ocinum* for the further reason that it moves (*citat*) the bowels of cattle, and is fed to them on that account, as a purgative. It is cut green from the bean crop before it forms pods. [5] *Farrago*, on the other hand, is so called from a crop where a mixture of barley, vetch, and legumes has been sowed for green feed, either because it is cut with the steel (*ferrum*, *ferrago*) or for the reason that it was first sowed in a spelt (*far*) field. It is with this that horses and other animals are purged and fattened in the spring. Vetch is so called from *vincire*, to bind, because it also has tendrils as the vine has, with which, when it creeps up to cling to the stalk of the lupine or some other plant, it usually binds (*vincit*) it. If you have meadows to be irrigated, as soon as you have gathered the hay, irrigate them. During droughts water should be given every evening to the fruit trees that are grafted. It may be that they are called *poma* from the fact that they need drink (*potus*).

[32.1] “In the fourth period, between the solstice and the Dog Star, most farmers harvest, because it is a saying that the grain is in the sheath for fifteen days, blooms for fifteen days, dries for fifteen days, and is then ripe. Ploughing should be completed, and it will be more valuable in proportion as it is done in warm ground; if you are ‘breaking up’ the ground it should be crushed, that is, gone over a second time so that the clods may be broken; for in the first ploughing large clods are cut from the ground. [2] You should sow vetch, lentils, small peas, pulse, and other plants, which some call legumes, and others, like some Gallic farmers, call *legarica*, both words being derived from *legere*, because these are not reaped, but are gathered by pulling. Hoe old vines a second time, young ones even a third time, if there are clods still

left.

[33.1] “In the fifth period, between the Dog Star and the autumnal equinox, the straw should be cut and stacks built, ploughed land harrowed, leaf-fodder gathered, and irrigated meadows mowed a second time.

[34.1] “In the sixth period, from the autumnal equinox, the authorities state that sowing should begin and continue up to the ninety-first day. After the winter solstice, unless necessity requires, there should be no sowing — a point of such importance that seeds which, when planted before the solstice, sprout in seven days, hardly sprout in forty if sowed after the solstice. And they hold that sowing should not begin before the equinox, because, if unfavourable seasons follow, the seeds usually rot. Beans are sowed to best advantage at the time of the setting of the Pleiades: [2] while the gathering of the grapes and the making of the vintage falls between the autumnal equinox and the setting of the Pleiades; then the pruning and layering of vines and the planting of fruit trees should begin. In some localities, where severe frosts come earlier, these operations are best carried on in spring.

[35.1] “In the seventh period, between the setting of the Pleiades and the winter solstice, they say that these operations should be carried out: — Planting of lilies and crocus. A rose which has already formed a root is cut from the root up into twigs a palm-breadth long and planted; later on the same twig is transplanted when it has made a living root. It is not profitable to plant violet beds on a farm for the reason that beds must be formed by heaping up the soil, and irrigation and heavy rains wash these away and thus make the ground poorer. [2] From the beginning of the west wind to the rising of Arcturus, it is proper to transplant from the nursery wild thyme, which gets its name (*serpillum*) from the fact that it ‘creeps’ (*serpit*). Dig new ditches, clear old ones, prune vineyards and orchards, provided you do not do this, or in fact most things, during the fifteen days preceding and following the solstice. And yet some trees, such as the elm, are properly planted at that time.

[36.1] “In the eighth period, between the solstice and the beginning of the west wind, these operations should be carried out: — Any water in the grain lands should be drained, but if there is a drought and the land is friable, harrow. Prune vineyards and orchards. When work cannot be carried out on the land, indoor tasks should be completed then in the early winter mornings. You should keep the rules I have laid down written and posted in the farmstead, in order that the overseer particularly may know them.

[37.1] “The lunar periods also must be taken into account; these are roughly twofold, as the moon waxes from the new to the full and then wanes again toward the new, until it reaches the intermenstruum, or time ‘between two months,’ on which day the moon is said to be ‘last and first’; hence, at Athens they call this day *ἐτην καὶ νέαν*, or ‘old and new,’ while others call it *τριακάδα*, or the ‘thirtieth.’ Some operations should be carried out on the land during the waxing rather than the waning of the moon, while there are certain crops which you should gather in the opposite phase, such as grain and

firewood.” [2] “I learned this rule from my father,” said Agrasius, “and I keep it not only in shearing my sheep but in cutting my hair, for fear that if I have it done when the moon is waxing I may become bald.” “After what method is the moon divided into quarters,” asked Agrius, “and what influence has that division on farming?” [3] “Have you never heard in the country,” replied Tremelius, “the expressions ‘eight days before the waxing of the moon,’ and ‘eight days before the waning of the moon,’ and that of the things which should be done when the moon is waxing some are nevertheless better done after this ‘eight days before the waxing’ than before it; and that the things which should be done when she is waning are better done the less light that heavenly body has? I have discussed the fourfold division in agriculture.”

[4] “There is,” said Stolo, “a second, a sixfold-division of seasons of which may be said to bear a relation to the sun and moon, because almost every product comes to perfection in five stages and reaches jar and basket in the farmstead, and from these is brought forth for use in the sixth. The first stage is the preparation, the second the planting, the third the cultivation, the fourth the harvesting, the fifth the storing, the sixth the marketing. In the matter of preparation: for some crops you must make trenches or dig thoroughly or draw furrows, as when you wish to make an arbustum or an orchard; for others you must plough or spade, as when you starting a grain field; [5] for some the earth must be turned more or less deeply with the trenching spade. For some trees, such as the cypress, spread their roots less, and others, such as the plane, more; so much, indeed, that Theophrastus mentions a plane tree in the Lyceum at Athens which, even when it was quite young, had thrown out its roots to a spread of thirty-three cubits. Certain land, when you have broken it with oxen and plough, must be worked a second time before you broadcast the seed. Any preparation that is made in the matter of meadows consists in closing them from grazing, a practice which is usually observed from the time of the blooming of the pear trees; and if they are irrigated, in turning in the water at the proper time.

[38.1] “We must observe what parts of the land must be manured, how the manure is to be applied, and the best kind to use; for there are several varieties. Cassius states that the best manure is that of birds, except marsh- and sea-fowl; and that the dung of pigeons is the best of these, because it has the most heat and causes the ground to ferment. This should be broadcast on the land like seed, and not placed in piles like cattle dung. [2] My own opinion is that the best dung is from aviaries of thrushes and blackbirds, as it is not only good for the land, but is excellent food both for cattle and swine, to fatten them. Hence those who lease aviaries with the owner’s stipulation that the dung shall remain on the place pay less rent than those who have the use of it. Cassius states that next to pigeon dung human excrement is the best, and in the third place goat, sheep, and ass dung; [3] that horse dung is least valuable, but good on grain land; for on meadows it is the most valuable of all, as is that of all draught animals which feed on barley, because it produces

a quantity of grass. The farmer should make a dung-hill near the steading, so that the manure may be cleared out with the least labour. They say that if an oak stake is driven into the middle of it no serpent will breed there.

[39.1] “The second step, that of planting, requires care as to the season of planting which is suited to the nature of each seed. For in a field it is important to note the exposure of every section, and also the season at which each plant grows best. Do we not observe that some blossom in spring, some in summer, and that the autumn growth is not the same as the winter? [2] Thus some plants are sown and grafted and harvested earlier or later than others; and while most are grafted in spring rather than in autumn, figs are grafted near the solstice, and cherries actually in mid-winter. [3] Now as seeds are, in general, of four kinds — those furnished by nature, those which are transplanted from one piece of ground to another as rooted slips, cuttings from trees planted in the ground, and grafts from tree to tree — you should observe what separate operation should be carried out at each season and in each locality.

[40.1] “In the first place, the seed, which is the origin of growth, is of two kinds, one being invisible, the other visible. There are invisible seed, if, as the naturalist Anaxagoras holds, they are in the air, and if the water which flows on the land carries them, as Theophrastus writes. The seed which can be seen should be carefully watched by the farmer; for some seed, such as that of the cypress, though capable of generating, is so small that it can hardly be seen; (for the pods which it bears, that look like little balls of bark, are not the seeds but contain them). [2] The original seeds were given by nature, while the later were discovered in the experiments of the farmer. The first are those which, without the aid of the farmer, grow without being sown; the second are those which, derived from these, do not grow without being sown. In the case of the first, care should be taken to see that they are not dried out from age, and that they are clean and not mixed with seed of similar appearance. The age of the seed is of such importance in the case of some plants that it alters their nature; thus from the planting of old cabbage seeds it is said that rape grows, and on the other hand that cabbage grows from old rape seed. [3] In the case of the second class of seed, you should be careful not to transplant them too early or too late. The proper time is that given by Theophrastus — spring, autumn, and at the rising of the Dog Star — but the time is not the same for all localities and all species. In ground that is dry, thin, or clayey, spring is the proper season, because it is less humid; in good, rich land the autumn, because in spring it is very wet. Some authorities allow about thirty days for such planting. [4] In the third method, which consists in transferring shoots from a tree into the ground, if the shoot is buried in the earth, you must be careful, in the case of some, that the shoot be removed at the proper time — that is, before it shows any sign of budding or blossoming; and that what you transplant from the tree you tear from the stock rather than break off a limb, as the heel of a shoot is steadier, or the wider it is the more easily it puts out

roots. They are thrust into the ground at once, before the sap dries out. In the case of olive cuttings, care must be taken that they be from a tender branch, sharpened evenly at both ends. Such cuttings, about a foot in length, are called by some clavolae, and by others taleae. [5] In the fourth method, which consists in running a shoot from one tree to another, the points to be observed are the nature of the tree, the season, and the method of fastening. You cannot, for instance, graft a pear on an oak, even though you can on an apple. This is a matter of importance to many people who pay considerable attention to the soothsayers; for these have a saying that when a tree has been grafted with several varieties, the one that attracts the lightning turns into as many bolts as there are varieties, though the stroke is a single one. No matter how good the pear shoot which you graft on a wild pear, the fruit will not be as well flavoured as if you graft it on a cultivated pear. [6] It is a general rule in grafting, if the shoot and the tree are of the same species, as, for instance, if both are of the apple family, that for the effect on the fruit the grafting should be of a such a nature that the shoot is of a better type than the tree on which it is grafted. There is a second method of grafting from tree to tree which has recently been developed, under conditions where the trees stand close to each other. From the tree from which you wish to take the shoot a small branch is run to the tree on which you wish to graft and is inserted in a branch of the latter which has been cut off and split; the part which fits into the branch having first been sharpened on both sides with the knife so that one side the part which will be exposed to the weather will have bark fitted accurately to bark. Care is taken to have the tip of the grafted shoot point straight up. The next year, after it has taken firm hold, it is cut off the parent stem.

[41.1] “As to the proper season for grafting, this must be especially observed: that some plants which formerly were grafted in spring are now grafted in mid-summer also, such as the fig, which, as the wood is not hard, requires warm weather; it is for this reason that fig groves cannot be planted in cold localities. Moisture is harmful to a fresh graft, for it causes the tender shoot to decay quickly, [2] and hence it is the common view that this tree is best grafted in the dog days. In the case of plants which are not so soft, however, a vessel is fastened above the graft in such a way that water may drip slowly to keep the shoot from drying out before it unites with the tree. The bark of the shoot must be kept uninjured, and the shoot itself be sharpened in such a way as not to bare the pith. To prevent moisture or excessive heat from injuring it on the surface its be smeared with clay and tied up with bark. [3] For this reason the vine is cut off three days before grafting, so that any excessive moisture in it may run out before it is grafted; or else a cut is made in the branch on which the graft is made a little lower than the graft, so as to allow casual water to run off. On the other hand, figs, pomegranates, and plants of a drier nature are grafted at once. In other graftings, such as of figs, care must be taken that the shoot contains a bud.

[4] “Of these four forms of propagation it is better to use quicksets in the

case of some slow-growing plants, as is the practice in fig groves; for the natural seed of the fig is on the inside of the fruit which we eat, in the form of very small grains. As the seedling can scarcely spring from these small grains — for all things which are small and dry grow slowly, while those which are of looser texture are also of more rapid growth, as, for instance, the female grows more rapidly than the male, a rule which holds good also in plants to some extent, the fig, the pomegranate, and the vine being, on account of their feminine softness, of rapid growth, while, on the other hand, the palm, the cypress, and the olive are of slow growth; [5] for in this respect the humid [are quicker] than the dry — it is therefore better to plant in the nursery shoots from the fig tree than grains from the fruit; unless this is impracticable, as when you wish to ship seeds overseas or import them thence. In this case we pass a string through the figs when they are ripe for eating, and after they have dried they are tied in bundles and may be sent where we will; and there they are planted in a nursery and reproduce. [6] It was in this manner that the Chian, Chalcidian, Lydian, African, and other varieties of over-sea figs were imported into Italy. For a similar reason, the seed of the olive being a nut, we prefer to plant in our nurseries the cuttings which I have described, as the stem was found to spring more slowly from the olive nut than from others.

[42.1] “Be especially careful not to plant in ground that is very dry or very wet, but rather in moderately moist ground. Authorities state that the proper amount of alfalfa is a modius and a half to the iugerum, if the ground is by nature moderately moist; the method of sowing is to broadcast the seed, as is done in sowing forage crops and grain.

[43.1] “Snail-clover is sowed on land that has been thoroughly worked, like cabbage seed; then it is transplanted at intervals of a foot and a half, or, when the plant is more mature, shoots are detached, and it is set out in planting as above.

[44.1] “Beans are sowed 4 modii to the iugerum, wheat 5, barley 6, spelt 10, the amount being a little more or less in some localities; more being sowed on rich ground and less on thin. You should therefore note the amount that is usually sowed in the district and follow this practice; for the locality and the type of soil is so important that the same seed in one district yields tenfold and in another fifteen-fold — as at some places in Etruria. [2] Around Sybaris in Italy the normal yield is said to be even a hundred to one, and a like yield is reported near Gadara in Syria, and for the district of Byzacium in Africa. It also makes a great difference whether the planting is on virgin soil or on what is called *restibilis* — land cultivated every year — or on *vervactum*, which is allowed sometimes to lie fallow between crops.” [3] “In Olynthia,” remarked Agrius, “they say that the land is cropped every year, but in such a way that a richer crop is produced every other year.” “Land ought to be left every other year with somewhat lighter crops,” rejoined Licinius; “I mean by that crops which are less exhausting to the land.”

“Tell us now,” said Agrius, “of the third step, the nurture and feeding of the

plant.” [4] “All plants,” resumed Stolo, “grow in the soil, and when mature conceive, and when the time of gestation is complete bear fruit or ear, or the like; and the seed returns whence it came. Thus, if you pluck the blossom or an unripe pear, or the like, no second one will grown on the same spot in the same year, as the same plant cannot have two periods of gestation. For trees and plants, just as women, have a definite period from conception to birth.

[45.1] “Barley usually appears in seven days, wheat not much later; legumes usually in four or five days, except the bean, which is somewhat slower in appearing. Millet also, and sesame, and similar plants appear in about the same number of days, except in cases where the locality or the weather prevents this from occurring. [2] Seedlings in the nursery should be covered with leaves or straw during the winter if the locality is at all cold, as they are tender; and if rains follow, water must not be allowed to stand anywhere, for frost is baneful to the tender rootlets. [3] Plants do not grow at the same rate below and above ground; thus roots grow faster below than does the part above ground in autumn and in winter because, being covered, they are nourished by the heat of the earth, while the part above ground is checked by the colder air. Wild plants which have not been touched by the planter show that this is true; for roots grow before the plant which comes from them, but they go no deeper than the point to which the sun’s warmth reaches. The growth of roots is determined by two factors: that nature thrusts one kind of wood to a greater distance than another; and that one kind of soil yields more readily than another.

[46.1] “As a result of factors of this kind there are several remarkable differences of character; so that, for instance, the season may be told from the leaves of such trees as the olive, the silver poplar, and the willow, by the direction in which they lie; thus when the leaves of these trees turn over it is said that the summer solstice has passed. No less remarkable is the behaviour of the flowers which are called ‘heliotropes’ from the fact that they face the rising sun in the morning and follow his course until the setting, facing him the whole time.

[47.1] “Plants such as the olive and fig, such, reared in the nursery from shoots and naturally somewhat delicate on top, should be protected at the top by two boards tied right and left; and the weeds should be cleared. These should be pulled while they are young; for after they become dry they resist more strongly, and break off more readily than they yield. On the other hand, growth that springs up on a meadow for haying must not only not be plucked while it is maturing, but also must not be trampled. For this reason flocks, and every sort of animal, including even man, must be kept off a meadow; for the foot of man is death to grass and marks the beginning of a path.

[48.1] “Now, in the case of grain crops, that by which the stalk puts forth the grain is the head. If is this “hornless,” as in barley and wheat, it has three components: the grain, the husk, and the beard — and the sheath, also, when the ear first appears. The hard inner part is called the grain; the husk is its

envelope; and the beard is the part which rises from the husk like a long, slender needle, just as if the husk and bead formed a peaked cap for the grain. [2] 'Beard' and 'grain' are familiar words to most people, but 'husk' (gluma) to few; thus the only place where it occurs, to my knowledge, is in Ennius, in his translation of Euhemerus. The word (gluma) seems to be derived from glubere, 'strip,' because the grain is stripped (deglubitur) from this envelope; so the same word is used for the envelope of the edible fruit of the fig tree. The beard is called arista from the fact that it is the first part to dry (arescere). The grain is so called from gerere; for the seed is planted that the ear may 'bear' (gerat) the grain, not the husk of the beard; just as the vine is planted not to bear leaves but grapes. The ear, however, which the peasants, in their old-fashioned way, call specā, seems to have got its name from spes; for it is because they hope (sperant) to have this grow that they plant. [3] An ear which has no beard is said to be 'hornless,' as the beard may be said to be the 'horns' of the ear. When these are just forming and are not yet quite visible, the green envelope under which they are hidden is called the sheath, being like the sheath in which a sword is encased. The part at the top of the full-grown ear, which is smaller than the grain, is called frit; while the part, also smaller than the grain, at the bottom of the ear where it joins the top of the stalk is called urru."

[49.1] Stolo paused at this point, and, judging from the fact that no questions were asked that no further discussion of nutrition was desired, he continued: "I shall discuss next the subject of harvesting the ripe crops. First the grass on the hay-meadows should be cut close with the sickle when it ceases to grow and begins to dry out with the heat, and turned with the fork while it is drying out; when it is quite dry it should be made into bundles and hauled to the barn. Then the loose hay from the meadows should be raked up and added to the hay-pile. [2] After doing this you should 'sickle' the meadows — that is, cut with the sickle what the mowers have passed over, leaving the field humped, as it were, with tufts of grass. I suppose the verb sicilire, used with meadow as object, is derived from this cutting (sectio).

[50.1] "The word messis is properly employed of the crops which we 'measure' (metimur), especially of grain; and this, I suggest, is the derivation of the word. There are three methods of harvesting grain: the first, employed in Umbria, in which the stalk is cut close to the ground with the hook, and each bundle, as it is cut, is laid on the ground. When a number of bundles are formed, they go over them again, and cut the ears from each close to the stalk. The ears are cast into the basket and carried to the threshing-floor, while the straw is left in the field and afterwards stacked. [2] In the second method, employed in Picenum, they use a curved handle of wood with a small iron saw attached to the end; when this catches a bundle of ears it cuts them off and leaves the straw standing in the field to be cut later. In the third method, employed near Rome and in numerous other places, seizing the top with the left hand they cut the straw in the middle; and I suggest that the word messis

is derived from this middle (medium) which they cut. The part of the stalk below the hand remains attached to the ground, and is cut later; [3] while the part which is attached to the ear is carried to the threshing-floor in baskets. The name for straw, *palea*, may be derived from the fact that there, in an uncovered place, it is detached ‘openly’ (*palam*); some derive the other word, *stramentum*, from *stare*, as they do also the word *stamen*, and others from *stratus*, because it is ‘spread’ (*substernitur*) under cattle. The grain should be cut when it is ripe; and on easily worked land it is held that the reaping of one iugerum is approximately a day’s work for one man — this should include the carrying of the reaped ears to the threshing-floor in baskets.

[51.1] “The threshing-floor should be on the place, in a somewhat elevated spot, so that the wind can sweep over it; the size should be determined by the size of the harvest. It should preferably be round, with a slight elevation at the centre, so that, if it rains, water will not stand but be able to run off the floor in the shortest line — and of course in a circle the shortest line is from the centre to the circumference. It should be built of solid dirt, well packed, and especially if it is of clay, so that it may not crack in the heat and allow the grain to hide, or take in water and open the door to mice and ants. For this reason it is customary to coat it with *amurca*, which is poison to weeds, ants, and moles. [2] Some farmers build up the floor with stone to make it solid, or even pave it. Others, such as the *Bagienni*, go so far as to build a shelter over the floors, because in that country rain-storms frequently occur at threshing time. When the floor is without a roof and the climate is hot, a shelter should be built hard by, to which the hands may go at midday in hot weather.

[52.1] “On the threshing-floor the largest and best ears should be placed apart, to furnish the best seed, and the grain should be threshed on the floor. This is done in some districts by means of a yoke of steers and a sledge. The latter is constructed either of a board made rough with stones or iron, which separates the grain from the ear when it is dragged by a yoke of steers with the driver or a heavy weight on it; or of a toothed axle running on low wheels, called a *Punic cart*, the driver sitting on it and driving the steers which drag it — a contrivance in use in Hither Spain and other places. [2] Among other peoples the threshing is done by turning in cattle and driving them around with goads, the grain being separated from the beards by their hoofs. After the threshing the grain should be tossed from the ground when the wind is blowing gently, with winnowing fans or forks. The result is that the lightest part of it, called *acus* and *palea*, is fanned outside the floor, while the grain, being heavy, comes clean to the basket.

[53.1] “When the harvest is over the gleaning should be let, or the loose stalks gathered with your own force, or, if the ears left are few and the cost of labour high, it should be pastured. For the thing to be kept in view in this matter is that the expense shall not exceed the profit.

[54.1] “As to vineyards, the vintage should begin when the grapes are ripe; and you must choose the variety of grapes and the part of the vineyard with

which to begin. For the early grapes, and the hybrids, the so-called black, ripen much earlier and so must be gathered sooner; and the part of the plantation and vineyard which is sunnier should have its vines stripped first. [2] At the vintage the careful farmer not only gathers but selects his grapes; he gathers for drinking and selects for eating. So those gathered are carried to the wine-yard, thence to go into the empty jar; those selected are carried to a separate basket, to be placed thence in small pots and thrust into jars filled with wine dregs, while others are plunged into the pond in a jar sealed with pitch, and still others go up to their place in the larder. When the grapes have been trodden, the stalks and skins should be placed under the press, so that whatever must remains in them may be pressed out into the same vat. [3] When the flow ceases under the press, some people trim around the edges of the mass and press again; this second pressing is called *circumsicium*, and the juice is kept separate because it tastes of the knife. The pressed grape-skins are turned into jars and water is added; this liquid is called *lora*, from the fact that the skins are washed (*lota*), and it is issued to the labourers in winter instead of wine.

[55.1] “With regard to the olive harvest: the olives which can be reached from the ground or by ladders should be picked rather than shaken down, because the fruit which has been bruised dries out and does not yield so much oil. Those picked with bare fingers are better than those picked with gloves, as the hard gloves not only bruise the berry [2] but also tear the bark from the branches and leave them exposed to the frost. Those which cannot be reached with the hand should be beaten down; but a reed should be used rather than a pole, as the heavier blow renders necessary the work of the tree-doctor. The one who is beating should not strike the olive directly; [3] for an olive struck in this way often tears away the shoot with it, and the fruit of the next year is lost. This is not the least reason for the saying that the olive fails to bear a crop every other year, or does not bear so full a crop. [4] The olive reaches the steading by the same two roads as the grape, one portion for food, and one to gush forth and anoint the body not only within but also without, thus following the master into the bath and into the gymnasium. [5] The portion from which oil is made is usually heaped on a flooring in piles as it comes in from day to day, so that it may mellow a little; and the piles pass in the same order through the jars and the olive vessels to the *trapeta*, which is an olive-mill fitted with hard stones roughened on the surface. [6] If the olives, after being picked, lie too long in the piles, they spoil from the heat and the oil becomes rancid; hence, if you cannot work them up promptly they should be aired by moving them about in the piles. [7] The olive yields two products: oil, well known to all, and *amurca*. As most people are ignorant of the value of the latter, you may see it flowing out from the olive presses on to the fields, and not only blackening the ground but rendering it barren when there is a large quantity of it; whereas, in moderate quantities, this fluid is not only extremely valuable for many purposes, but is especially valuable in agriculture, as it is

usually poured around the roots of trees, chiefly olive trees, and where noxious weeds grow in the fields.”

[56.1] “I have been sitting in the steading for a long time,” exclaimed Agrius, “waiting, key in hand, Stolo, for you to bring the crops into the barn.” “Well,” replied Stolo, “here I am. I am coming up to the threshold; open the doors. First, it is better to stow the hay crop under cover than in stacks, as by this method it makes better fodder — as is proved by the fact that when both kinds are offered them, cattle prefer the former.

[57.1] “Wheat should be stored in granaries, above ground, open to the draught on the east and north, and not exposed to damp air rising in the vicinity. The walls and floor are to be coated with marble cement, [2] or at least with clay mixed with grain-chaff and amurca, as this both keeps out mice and worms and makes the grain more solid and firm. Some farmers sprinkle the wheat, too, with amurca, using a quadrantal to about a thousand modii. Different farmers use different powders or sprays, such as Chalcidian or Carian chalk, or wormwood, and other things of this kind. Some use underground caves as granaries, the so-called *sirus*, such as occur in Cappadocia and Thrace; and still others use wells, as in the Carthaginian and Oscensian districts in Hither Spain. They cover the bottom of these with straw, and are careful not to let moisture or air touch them, except when the grain is removed for use; for the weevil does not breed where air does not reach. Wheat stored in this way keeps as long as fifty years, and millet more than a hundred. [3] Some people, as in Hither Spain and in Apulia, build granaries in the field, above ground, so constructed that the wind can cool them not only from the sides, through windows, but also beneath from the ground. Beans and legumes are kept fresh for a very long time in olive jars sealed with ashes.

[58.1] “Cato says that smaller and larger Aminnian grape, and the Apician, are best stored in jars, and that the same grapes keep well also in boiled or plain must; and that the best ones for drying are the hard grapes and the Aminnian.

[59.1] “The varieties of apples for preserving are the smaller and larger quinces, the Scantian, the Scaudian, the small round, and those formerly called must-apples, but now called honey-apples. It is thought that all these keep well in a dry and cool place, laid on straw. For this reason those who build fruit-houses are careful to let them have windows facing the north and open to the wind; but they have shutters, to keep the fruit from shrivelling after losing its juice, when the wind blows steadily. [2] And it is for this reason, too — to make it cooler — that they coat the ceilings, walls, and floors with marble cement. Some people even spread a dining-table in it to dine there; and, in fact, if luxury allows people to do this in a picture gallery, where the scene is set by art, why should they not enjoy a scene set by nature, in a charming arrangement of fruit? Provided always that you do not follow the example set by some, of buying fruit in Rome and carrying it to the country to

pile it up in the fruit-gallery for a dinner-party. [3] Some think that apples keep quite well in the gallery if placed on boards on the cement, but others lay them on straw, or even on wool; that pomegranates are preserved by burying their stems in a jar of sand, and large and small quinces in hanging baskets; while, on the other hand, late Anician pears keep best when put down in boiled must. Some hold that boiled sorbs keep best when cut up and dried in the sun, like pears; and that sorbs are easily kept just as they are, wherever they are put, if the place is dry; that rape should be cut up and preserved in mustard, walnuts in sand. Pomegranates are also kept in sand if they are stored freshly gathered and ripe; green ones also, if you keep them on the branch, put them in a pot with no bottom, bury them in the ground, and seal the ends of the branches so that no outside air can reach them; such fruits will be taken out not only sound but even larger than they would ever be if they had hung on the tree.

[60.1] "Of the olives, Cato writes that the table olives, the *orcites*, and the *posea* are best preserved either green or in brine, or, when bruised, in mastic oil. The black *orcites*, if they are covered with salt for five days after being dried, and then, after the salt has been shaken off, are exposed to the sun for two days, usually keep sound; and that the same varieties may be satisfactorily preserved unsalted in boiled must.

[61.1] "Experienced farmers store their *amurca* in jars, just as they do oil and wine. The method of preserving is: as soon as it flows out from the press, two-thirds of it is boiled away, and when it is cool it is stored in vessels. There are also other methods, such as that in which must is added.

[62.1] "As no one stores the products of the farm except to bring them forth later, a few remarks must be made about this, the sixth step. Preserved things are brought out of storage because they are to be either protected or consumed or sold. As the three operations are for different purposes, the protecting and the consuming take place at different times.

[63.1] "Grain which the weevil has begun to infest should be brought out for protection. When it is brought out, bowls of water should be placed around in the sun; the weevils will congregate at these and drown themselves. Those who keep their grain under ground in the pits which they call *sirus* should remove the grain some time after the pits are opened, as it is dangerous to enter them immediately, some people having been suffocated while doing so. Spelt which you have stored in the ear at harvest-time and wish to prepare for food should be brought out in winter, so that it may be ground in the mill and parched.

[64.1] "*Amurca*, which is a watery fluid, after it is pressed from the olives is stored along with the dregs in an earthenware vessel. Some farmers use the following method for preserving it: After fifteen days the dregs which, being lighter, have risen to the top are blown off, and the fluid is turned into other vessels; this operation is repeated at the same intervals twelve times during the next six months, the last cleansing being done preferably when the moon is waning. Then they boil in copper vessels over a slow fire until it is reduced

to two-thirds its volume. It is then fit to be drawn off for use.

[65.1] “Must which is stored in jars to make wine should not be brought out while it is fermenting, and not even after the fermentation has gone far enough to make wine. If you wish to drink old wine (and wine is not old enough until a year has been added to its age), it should be brought out when it is a year old. But if it is of the variety of grapes that sours quickly, it must be used up or sold before the next vintage. There are brands of wine, the Falernian for instance, which are the more valuable when brought out the more years you have kept them in store.

[66.1] “If you take out the preserved white olives soon, while they are fresh, the palate will reject them because of the bitter taste; and likewise the black olives, unless you first steep them in salt so that they may be taken into the mouth without distaste.

[67.1] “As for the walnut, the date, and the Sabine fig, the sooner you use them the better the flavour; for with time the fig gets too pale, the date too soft, and the nut too dry.

[68.1] “Fruits that are hung, such as grapes, apples, and sorbs, themselves indicate the proper time for consumption; for by the change of colour and the shrivelling of the skin they put you on notice that if you do not take them down to eat they will come down to be thrown away. If you store sorbs which are ripe and soft, you must use them quickly; those hung up when sour may wait, for they mean, before ripening, to reach in the house a degree of maturity which they cannot reach on the tree.

[69.1] “The part of the spelt harvest which you wish to have ready for food should be taken out in winter to be roasted at the mill; while the part reserved for seed should be taken out when the land is ready to receive it. With regard to seed in general, each kind should be taken out at its proper time. As to the crops intended for market, care must be used as to the proper time for taking out each; thus you should take out and sell at once those which do not stand storage before they spoil, while you should sell those which keep well when the price is high. For often products which have been stored quite a long time will not only pay interest on the storage, but even double the profit if they are marketed at the right time.”

[2] While he was speaking the sacristan's freedman runs up to us with tears in his eyes and begs us to pardon him keeping us so long, and asks us to go to a funeral for him the next day. We spring to our feet and cry out in chorus: “What? To a funeral? What funeral? What has happened?” Bursting into tears, he tells us that his master had been stabbed with a knife by someone, and had fallen to the ground; that in the crowd he could not tell who it was, but had only heard a voice saying that a mistake had been made. [3] As he had carried his old master home and sent the servants to find a surgeon and bring him with all speed, he hoped he might be pardoned for attending to his duty rather than coming to us; and though he had not been able to keep him from breathing his last a few moments later, he thought that he had acted rightly.

We had no fault to find with him, and walking down from the temple we went our several ways, rather blaming the mischances of life than being surprised that such a thing had occurred in Rome.

BOOK II

It was not without pleasure that those great men, our ancestors, put the Romans who lived in the country ahead of those who lived in the city. For as in the country those who live in the villa are lazier than those who are engaged in carrying out work on the land, so they thought that those who settled in town were more indolent than those who dwelt in the country. Hence they so divided the year that they attended to their town affairs only on the ninth days, and dwelt in the country on the remaining seven. [2] So long as they kept up this practice they attained both objects — keeping their lands most productive by cultivation, and themselves enjoying better health and not requiring the citified gymnasia of the Greeks. In these days one such gymnasium is hardly enough, and they do not think they have a real villa unless it rings with many resounding Greek names, places severally called procoetion (ante-room), palaestra (exercise-room), apodyterion (dressing-room), peristylon (colonnade), ornithon (aviary), peripteros (pergola), oporotheca (fruit-room). [3] As therefore in these days practically all the heads of families have sneaked within the walls, abandoning the sickle and the plough, and would rather busy their hands in the theatre and in the circus than in the grain-fields and the vineyards, we hire a man to bring us from Africa and Sardinia the grain with which to fill our stomachs, and the vintage we store comes in ships from the islands of Cos and Chios.

[4] And so, in a land where shepherds who founded the city taught their offspring the cultivation of the earth, there, on the contrary, their descendants, from greed and in the face of the laws, have made pastures out of grain lands — not knowing that agriculture and grazing are not the same thing. For the shepherd is one thing and the ploughman another; and it does not follow that because cattle can graze in a field the herdsman is the same as the ploughman. For grazing cattle do not produce what grows on the land, but tear it off with their teeth; while on the other hand the domestic ox becomes the cause why the grain grows more easily in the ploughed land, and the fodder in the fallow land. [5] The skill and knowledge of the farmer, I repeat, are one thing, and those of the herdsman another; in the province of the farmer are those things which are made to spring from the earth by cultivation of the land; in that of the herdsman, however, those that spring from the herd. As the association between them is very close, inasmuch as it is frequently more profitable to the owner of the farm to feed the fodder on the place than to sell it, and inasmuch as manure is admirably adapted to the fruits of the earth, and cattle especially fitted to produce it, one who owns a farm ought to have a knowledge of both pursuits, agriculture and cattle-raising, and also of the husbandry of the steading. For from it, too, no little revenue can be derived — from the poultry-yards, the rabbit-hutches, and the fishponds. [6] And since I have written a book for my wife, Fundania, on one of these subjects, that of

agriculture, on account of her owning a farm, for you, my dear Turranius Niger, who take keen delight in cattle, inasmuch as your feet often carry you, on buying bent, to market at Campi Macri, that you may more easily meet the outlay incurred by the many demands made upon you, I shall run over briefly and summarily the subject of cattle-raising; and I shall the more readily do this because I have myself owned large stocks of cattle, sheep in Apulia and horses in the district of Reate. I shall take as the foundation the conversations I had with extensive cattle-owners in Epirus, at the time when, during the war with the pirates, I was in command of the Greek fleets operating between Delos and Sicily. At this point I shall begin. . . .

[1.1] When Menates had left, Cossinius remarked to me: "We shall not let you go until you have set forth those three topics of which you had begun to speak when we were interrupted." "Which three?" inquired Murrius; "do you mean what you were saying to me yesterday about animal husbandry?" "The points our friend here had begun to discuss," said he, "the origin, the dignity, and science. . . ." [2] "Well," said I, "I shall speak at least of the historical side and tell what I have learned of the two topics first mentioned — the origin and the dignity. Scrofa will take up the tale at the third division, when it becomes a science. He is, if I may quote Greek to half-Greek shepherds, 'a much better man than I am.' For he is the man who taught your son-in-law, Gaius Lucilius Hirtius, whose flocks in the country of the Bruttii are renowned." "But you shall have this discussion by us," said Scrofa, "only on condition that you, who are the cattle-raising champions of Epirus, shall repay us by disclosing what you know of the subject; for no man can know everything." [3] When I had accepted the proposal and was to open the play — not that I do not own flocks myself in Italy, but not all who own a harp are harpers" — I began: "As it is a necessity of nature that people and flocks have always existed (whether there was an original generating principle of animals, as Thales of Miletus and Zeno of Citium thought, or, on the contrary, as was the view of Pythagoras of Samos and of Aristotle of Stagira, there was no point of beginning for them), it is a necessity that from the remotest antiquity of human life they have come down, as Dicaearchus teaches, step by step to our age, and that the most distant stage was that state of nature [4] in which man lived on those products which the virgin earth brought forth of her own accord; they descended from this stage into the second, the pastoral, in which they gathered for their use acorns, arbutus berries, mulberries, and other fruits by plucking them from wild and uncultivated trees and bushes, and likewise caught, shut up, and tamed such wild animals as they could for the like advantage. There is good reason to suppose that, of these, sheep were first taken, both because they are useful and because they are tractable; for these are naturally most placid and most adapted to the life of man. For to his food they brought milk and cheese, and to his body wool and skins for clothing. [5] Then by a third stage man came from the pastoral life to that of the tiller of the soil; in this they retained much of the former two stages, and after reaching it they went far before

reaching our stage. Even now there are several species of wild animals in various places: as of sheep in Phrygia, where numerous flocks are seen, and in Samothrace those goats which are called in Latin *rotæ*; for there are many wild goats in Italy in the vicinity of Mount Fiscellum and Mount Tetrica. As to swine, everybody knows — except those who think that wild boars ought not to be called swine. There are even now many quite wild cattle in Dardania, Maedica, and Thrace; wild asses in Phrygia and Lycaonia, and wild horses at several points in Hither Spain.

[6] “The origin is as I have given it; the dignity, as I shall now show. Of the ancients the most illustrious were all shepherds, as appears in both Greek and Latin literature, and in the ancient poets, who call some men ‘rich in flocks,’ others ‘rich in sheep,’ others ‘rich in herds’; and they have related that on account of their costliness some sheep actually had fleeces of gold — as at Argos the one which Atreus complains that Thyestes stole from him; or as in the realm of Aetes in Colchis, the ram in search of whose golden fleece the Argonauts of royal blood are said to have fared forth; or as among the Hesperides in Libya, from which Hercules brought from Africa to Greece golden mala, which is the ancient manner of naming goats and sheep. For the Greeks called these mela from the sound of their bleating; [7] and in fact our people give them a similar name from the same bleating, but with a different consonant (for the bleating seems to give the sound *be*, and not *me*), and they call the bleating of sheep *baelare*, and hence later, by the excision of a letter, as occurs in many words, *balare*. But if the flock had not been held in high honour among the ancients, the astronomers, in laying out the heavens, would not have called by their names the signs of the zodiac; they not only did not hesitate to give such names, but many of them begin their enumeration of the twelve signs with the names of the Ram and the Bull, placing them ahead of Apollo and Hercules. For those gods follow them, but are called the Twins. [8] And they were not content to have one-sixth of the twelve signs bear the names of domestic animals, but added Capricornus, so that one-fourth might have them. And besides this, they added of the domestic animals the she-goat, the kid, and the dog. Or are not tracts on land and sea also known by the names of animals? For instance, they named a sea *Aegean* from the word for goats, a mountain on the border of Syria, *Taurus*, a mountain in the Sabine country, *Cantherius*, and two straits *Bosphorus* (ox-ford) — the Thracian and the Cimmerian. [9] Did they not give such names to many places on land, as, for instance, the city in Greece called ‘*Hippion* (horse-rearing) *Argos*’? And, finally, is not Italy named from *vituli* (bullocks), as *Piso* states? Further, does not everyone agree that the Roman people is sprung from shepherds? Is there anyone who does not know that *Faustulus*, the foster-father who reared *Romulus* and *Remus*, was a shepherd? Will not the fact that they chose exactly the *Parilia* as the time to found a city demonstrate that they were themselves shepherds? Is not the same thing proved by the following facts: that up to this day a fine is assessed after the ancient fashion in oxen and

sheep; that the oldest copper coins are marked with cattle; [10] that when the city was founded the position of walls and gates was marked out by a bull and a cow; that when the Roman people is purified by the *suovetaurilia*, a boar, a ram, and a bull are driven around; that many of our family names are derived from both classes, the larger and the smaller, such as Porcius, Ovinus, Caprilus from the smaller, and Equitius, Taurus, Asinius from the larger; and that the so-called *cognomina* [surnames] prove the same thing, as, for instance, the Annii Caprae, the Statilii Tauri, the Pomponii Vituli, and many others, derived from the names of domestic animals?

[11] "It remains to speak of the science of animal husbandry, and our friend, Scrofa, to whom this generation presents the palm in all agricultural matters, and who is therefore better fitted, will discuss it." When the eyes of all were turned on him Scrofa began:—"Well, there is a science of assembling and feeding cattle in such fashion as to secure the greatest returns from them; the very word for money is derived from them, for cattle are the basis of all wealth. [12] The science embraces nine divisions under three topics of three divisions each: the topic of the smaller animals, with its three divisions, sheep, goats, swine; the second topic, that of the larger animals, with likewise its three classes naturally separate, oxen, asses, horses. The third topic comprises animals which are kept not for the profit derived from them, but for the purpose of the above groups, or as a result of them, mules, dogs, and herdsmen. Each one of these divisions includes at least nine general subdivisions; and of these four are necessarily involved in assembling and an equal number in feeding; while one is common to both. There are, then, at the lowest 81 subdivisions, all of them important and not one insignificant. [13] First: in order to assemble a sound flock one must know one item — at what age it is profitable to get and keep each several kind. Thus, in the matter of cattle, they can be purchased at a lower price below the age of one year and beyond that of ten years, for they begin to yield a profit after the age of two or three, and do not continue to do so much beyond the age of ten years — [14] the earliest youth and extreme age of all animals being barren. The second of the first four heads is a knowledge of the proper characteristics of each species of animal, as this has a very important bearing on the profit. Thus, one buys an ox with dark rather than with white horns, a full-bodied she-goat rather than a thin one, and swine with long bodies provided the head is small. The third point of inquiry is as to the breed; it is for this reason that in Greece the asses of Arcadia are noted, and in Italy those of Reate — so much so that within my recollection an ass fetched 60,000 sesterces, and one team of four at Rome sold for 400,000. [15] The fourth topic is the law of purchase — the proper legal form to be followed in the purchase of each separate species. In order that the property of another may become mine an intermediate step is necessary, and not in all purchases is an agreement or the payment of money sufficient to effect a change of ownership; and in a purchase it is sometimes to be stipulated that the animal is sound, sometimes that it is from a sound flock,

while at other times neither stipulation is made.

[16] "After the purchase has been made we come to the second group of four points which are to be observed: they are those concerned with pasturage, breeding, feeding, and health. Of pasturage, which is the first point, there are three divisions: the preferable locality for the pasturage of the several species, the time, and the manner; thus, it is better to pasture goats on a bushy hillside than on a grassy plain, while the opposite is true of mares. Again, the same localities are not equally suited in summer and winter to the pasturing of all species. Hence, flocks of sheep are driven all the way from Apulia into Samnium for summering, and are reported to the tax-collectors, for fear of offending against the censorial regulation forbidding the pasturing of unregistered flocks; [17] and mules are driven in summer from the level Rosea into the high mountains of Burbur. One must also consider the preferable method of pasturing each species — by which I do not mean merely that a horse or an ox is content with hay, but that barley and beans should be fed at intervals to some of them, and that lupines should be fed to oxen, and alfalfa and clover to milch cows; and besides that for thirty days before mating more food should be given rams and bulls to increase their vigour, and food should be lessened for the females, because it is claimed that they conceive more readily when they are thin. [18] The second topic is that of breeding — by which I mean the process from conception to birth, these being the limits of pregnancy. The first point to be observed, therefore, is that of mating — the time at which opportunity for coition should be allowed each species; thus, the period from the beginning of the west wind to the vernal equinox is deemed best suited to swine, while that from the setting of Arcturus to the setting of Aquila is considered best for sheep. Consideration should also be given to the proper period before breeding begins, during which the males should be kept away from the females — a period which both stockmen and shepherds usually fix at two months for all animals. [19] The second division comprises the points to be watched in breeding, arising from the difference among species in the period of gestation; thus, the mare carries her young twelve months, the cow ten, the sheep and the goat five, the sow four. (Speaking of breeding, there is a story from Spain which, though incredible, is quite authentic, that on the shore of the ocean in Lusitania, in the district in which is situated the town of Olisipo, certain mares on Mount Taurus, at a particular time of year, are impregnated by the wind; just as in this country frequently occurs in the case of those hens the eggs of which are called hypenemia. But the foals of these mares do not live beyond three years.) Care must be taken that the young which have gone the full time or longer have a clean, soft place to stand in, and that they be not trampled. Lambs which are born after the full period are called cordi, the name being derived from the fact that they have remained in those deep-lying folds which are called chorion. [20] There is a third item — the practice to be observed in the matter of feeding, including the number of days on which the young may have the

teat, at what times, and where; and if the mother is deficient in milk, that the young be allowed to suckle the udder of another mother. Such animals are called subrumi, ‘under the udder,’ the udder being called rumis, as I suppose, in old Latin. As a rule, lambs are not weaned under four months, kids under three, and pigs under two. Those of the last named which are pure for sacrifice and may be offered up, used to be called sacres; Plautus uses the term in his sentence: ‘What’s the price of sacred pigs?’ Similarly, oxen, fattened for public offerings, are called opimi, fatlings. [21] The fourth division is that of health — a complicated but extremely important matter, inasmuch as a sickly herd is a losing investment, and men frequently come to grief because it is not strong. There are two divisions of such knowledge, as there are in the treatment of human beings: in the one case the physician should be called in, while in the other even an attentive herdsman is competent to give the treatment. The topic has three heads: we must observe the cause of the several diseases, the symptoms displayed by such causes, and the proper method of treatment to be followed for each disease. [22] In general, sickness is caused by the fact that the animals are suffering from heat or from cold, or else from excessive work, or, on the other hand, from lack of exercise; or in case food or drink has been given them immediately after working, without a period of rest. The symptoms are that those which have fever from overwork keep the mouth open, pant fast with moist breath, and have hot bodies. The following is the treatment in such cases: [23] The animal is drenched with water, rubbed down with oil and warm wine, and, further, is sustained with food, and a covering is thrown over it to prevent a chill; in case of thirst tepid water is administered. If improvement is not obtained by such treatment, blood is let, usually from the head. Other diseases have other causes and other symptoms, and the man in charge of the herd should keep them all in written form.

[24] “There remains the ninth point I have mentioned, common to both divisions — the proper number. For the man who is feeding a herd must decide on the size, determining how many herds and how large he is going to graze, so that his pasturage will not run short, and so that he will not have idle pasturage and hence lose his profit. He must also decide how many females to have in the flock for breeding, how many males, how many young of each sex, and how many culls are to be cut out. In the matter of feeding, if too many young are born you should follow the practice of some breeders, and wean some of them; the result usually being that the rest grow better.”

[25] “Don’t get confused,” said Atticus, “and let your ninefold division get away from the matter of smaller and larger animals. How will you get a ninefold division in the case of mules and herdsman, where there is neither breeding nor bearing? [26] I see how you can use it in the case of dogs. I grant you also that even in the case of the humans the ninefold division can be retained, as they keep women in their huts in the winter ranches, and some have them even in the summer, thinking that this is worth while in order the more easily to keep the herdsman with their herds; and by the natural increase

they enlarge their slave gangs and make the cattle-raising more profitable.” “The number,” I remark, “is not to be taken as precisely accurate, just as we do not mean to be taken exactly when we say that a thousand ships set forth against Troy, or speak of the centumviral court at Rome. So, if you wish, subtract two of the topics, coition and foaling, when you speak of mules.” [27] “Foaling?” asked Vaccius; “why, don’t you know that it has several times been asserted that a mule has borne a colt at Rome?” To back up his statement, I add that both Mago and Dionysius remark that the mule and the mare bring forth in the twelfth month after conception. Hence we must not expect all lands to agree, even if it is considered a portent when a mule bears young here in Italy. Swallows and storks, for instance, which bear in Italy, do not bear in all lands. Surely you are aware that the date-palms of Syria bear fruit in Judea but cannot in Italy. [28] Scrofa, however, remarked: “If you insist on having 81 sub-heads, omitting the breeding and feeding of mules, you may easily fill that double gap; two very important sources of revenue fall outside the enumeration. There is the shearing — the clipping or pulling of wool and goat hair — and another, which is even more important, the matter of milk and cheese. The Greek authorities treat this as a separate topic, calling it *tyropoiia* (cheese-making), and have had a great deal to say about it.

[2.1] “But since I have completed my task, and the subject of stock-raising has been sketched in outline, you gentlemen of Epirus should take up the tale in your turn and let us see what the shepherds from Pergamis and Maledos can tell us under each head.” [2] Then Atticus, who at the time bore the name Titus Pomponius, but is now called Quintus Cornelius though he retains the same cognomen, began: “I suppose I should start the discussion, as you all seem to be looking to me, and I shall speak of the earliest branch of animal husbandry, as you claim that sheep were the first of the wild animals to be caught and tamed by man. The first consideration is that these be in good condition when purchased; with respect to age that they be neither too old nor mere lambs, the latter being not yet, and the former no longer profitable — though the age which is followed by hope is better than the one which is followed by death. [3] As to form, sheep should be full-bodied, with abundant soft fleece, with fibres long and thick over the whole body, especially about the shoulders and neck, and should have a shaggy belly also. In fact, sheep which did not have this our ancestors called ‘bald’ (*apicas*), and would have none of them. The legs should be short; and observe that the tail should be long in Italy but short in Syria. The most important point to watch is to have a flock from good stock. [4] This can usually be judged by two points — the form and the progeny; by the form if the ram have a full coating of fleece on the forehead, have flat horns curving towards the muzzle, grey eyes, and ears overgrown with wool; if they are full-bodied, with wide chest, shoulders, and hind-quarters, and a wide, long tail. A black or spotted tongue is also to be avoided, for rams with such a tongue usually beget black or spotted lambs. The stock is determined by the progeny if they beget handsome lambs. [5] In purchasing we take

advantage of the variation which the law allows, some making more and others fewer exceptions; thus, some purchasers, when the price is fixed by the head, stipulate that two late-born lambs count as one sheep, and in the case of those which have lost their teeth from age, that they also be reckoned two for one. With this exception, the ancient formula is generally employed: when the purchaser has said, 'They are sold at such a price?' and the seller has replied, 'Yes,' and the money has passed, the purchaser, using the old formula, says: [6] 'You guarantee that the sheep in question are perfectly sound, up to the standard of a flock which is perfectly sound, excepting those blind of one eye, deaf, or minae (that is, with belly bare of wool), that they do not come from a diseased flock, and that title may legally pass — that all this may be properly done?' Even after this has been agreed on, the flock does not change owners unless the money has been counted; and the purchaser still has the right to obtain a judgment against the vendor against the law of purchase and sale if he does not make delivery, even though no money has passed; just as the vendor may obtain a judgment against the purchaser under the same law if he does not make payment.

[7] "I shall discuss next the remaining four points — pasturage, breeding, feeding, health. It is first to be arranged that they feed properly the year round, indoors and out. The fold should be placed in a suitable situation, protected from the wind, and facing the east rather than the south. The ground on which they are to stand should be clear of undergrowth and sloping, so that it can easily be swept and kept clean; for the moisture of the ground injures not only the fleece of the sheep but their hoofs as well, and causes them to become scabby. [8] When they have been standing for some days, fresh brush should be spread for them, to give them a softer bed and keep them cleaner; for this increases their appetite. Separate enclosures should also be built, so that you may take the pregnant ones away from the flock, and also those that are sick. These measures concern most the flocks which are folded at the steading. [9] On the other hand, in the case of those that feed on the ranges and are far from cover, hurdles or nets are carried with which to make enclosures in a desolate district, as well as other necessary things; for they usually graze far and wide in all sorts of places, so that frequently the winter grazing grounds are many miles away from the summer." "I am well aware of that," said I, "for I had flocks that wintered in Apulia and summered in the mountains around Reate, these two widely separated ranges being connected by public cattle-trails, as a pair of buckets by their yoke." [10] "Such flocks, even when they feed in the same locality, are treated differently at different seasons; thus, in summer they begin feeding at daybreak, because at that time the grass, filled with dew, is superior to the grass of midday, which is drier. At sunrise they are driven to water, to make them more eager to graze when they come back. [11] During the midday heat they are driven under shady cliffs and wide-spreading trees to cool off until the day grows cooler; and they feed again in the evening until sunset. Sheep should be headed in grazing in such a way as to have the sun

behind them, as the head of the sheep is its weakest part. A short time after sunset they are driven to water, and then again they graze until it becomes quite dark; for at this time the succulence comes again to the grass. This practice is usually kept up from the rising of the Pleiades until the autumnal equinox. [12] It is profitable to drive them into stubble fields for two reasons: they get their fill of the ears that have fallen, and make the crop better the next year by trampling the straw and by their dung. The feeding during the rest of the year, winter and spring, varies from this, in that when the frost has melted they are driven out to feed and range the whole day, and it is considered sufficient for them to be driven to water only once, at midday.

[13] "With regard to pasturage the foregoing remarks will suffice; the following apply to breeding. The rams which are to be used for breeding are to be removed from the flock two months ahead, and fed more generously. If barley is fed them on their return to the pens from the pasture, they are strengthened for the work before them. The best time for mating is from the setting of Arcturus to the setting of Aquila; as lambs which are conceived after that time grow undersized and weak. [14] As the period of pregnancy of the sheep is 150 days, the birth thus occurs at the close of autumn, when the air is fairly temperate, and the grass which is called forth by the early rains is just growing. During the whole time of breeding they should drink the same water, as a change of water causes the wool to spot and is injurious to the womb. When all the ewes have conceived, the rams should again be removed, as they are troublesome in worrying the ewes which have now become pregnant. Ewes less than two years old should not be allowed to breed, for the offspring of these is not sturdy and the ewes themselves are injured; and no others are better than the three-year-olds for breeding. They may be protected from the male by binding behind them baskets made of rushes or other material; but they are protected more easily if they feed apart.

[15] "As to feeding: when they begin to bear they are driven into the pens which are kept separate for that purpose; and there the new-born lambs are placed near a fire until they get their strength. They are kept penned for two or three days, while they are learning to recognise their dams and are getting their fill of nourishment. Then the dams go to pasture with the flock, and the lambs are kept penned; when the dams are brought back to them toward evening, the lambs are suckled by them and are again separated to keep them from being trampled by the dams during the night. The same thing takes place in the morning, before the dams go out to pasture, so that the lambs may be filled with milk. [16] When about ten days have passed, stakes are set to which the lambs are fastened at intervals by bark or other smooth ropes, so that the tender young things may not knock the skin off any of their legs while frisking about together during the whole day. If the lamb will not come to its dam's udder, it should be held close and its lips smeared with butter or hog's lard and the lips be given the savour of milk. A few days later ground vetch or tender grass is thrown out to them before they go out to pasture and when they

come back; [17] and this feeding is continued until they are four months old. During this time some breeders do not milk the dams; and it is even better not to milk them at all, as they both yield more wool and bear more lambs. When the lambs are removed from the dams, care must be taken that they do not sicken from the separation; and so in feeding they must be coaxed by the daintiness of the food and guarded from being harmed by cold and heat. [18] They must be driven into the flock only after they no longer miss the dam, because they have forgotten the taste of milk. Lambs should be castrated not earlier than the fifth month, and then not until the heat or the cold has broken. Those they wish to rear for rams are chosen preferably from the young of dams which usually bear twins. The treatment is, in general, the same in the case of jacketed sheep — those which, on account of the excellence of the wool, are jacketed with skins, as is the practice at Tarentum and in Attica, to prevent the fleece from being soiled, in which case it cannot be so well dyed, or washed and bleached. [19] More care is employed in the case of these than in the case of rough-fleeced sheep, to keep the folds and stalls clean; and so they are covered with a stone pavement so that the urine may not stand anywhere in the stalls. To these the food which they prefer, such as fig leaves, straw, grape dregs, and bran, is fed in moderate quantities, to avoid under-feeding or over-feeding; either of which is harmful to their fattening, while alfalfa and snail-clover are both beneficial, as these fatten them very easily and produce milk.

[20] “In the matter of health there are many rules; but, as I said, the head shepherd keeps these written down in a book, and carries with him the remedies he may need. The only remaining division is that of number, and some make this larger, others smaller; for there are no natural limits in this respect. Our almost universal practice in Epirus is not to have less than one shepherd to the hundred rough-fleeced sheep, and two to the hundred jacketed sheep.”

[3.1] Cossinius, addressing him, said: “As you have bleated long enough, my dear Faustulus, now hear from me, as from Homer’s Melanthius born out of due season, with regard to goats; and learn how one ought to speak, briefly and to the point. One who decides to assemble a flock of goats should, in choosing his animals, have regard first to age, picking those of the age which is already capable of bringing in a profit, and this age preferably the one which can bring it longer; for the young goat is more profitable than the old. [2] As to conformation, see that they be strong and large, and have a smooth coat with thick hair, unless, to be sure, they belong to the hairless breed, for there are two breeds of goats. They should have two teat-like growths hanging under the chin, as such goats are more fertile; they should have rather large udders, so that they may give a greater quantity of milk and of richer quality in proportion. The buck should have hair which is rather soft and by preference white; short shoulders and neck; and a somewhat long throat. The flock is better if it is not formed of animals bought here and there, but of those

which are accustomed to run together. [3] As to the breed, I make the remark which Atticus made with regard to sheep; with this exception, that the race of sheep is more quiet, inasmuch as they are gentler, while on the other hand that of goats is more nimble. As to their activity, Cato says in his *Origines*: ‘On Soracte and Fiscellum there are wild goats which make leaps of more than sixty feet from the cliffs.’ For just as the domesticated sheep is sprung from the wild sheep, so the domesticated goat is sprung from the wild goat; and the island Caprasia, off the coast of Italy, derives its name from these. [4] As she-goats which bear twins are of better stock, it is from these, preferably, that the males are usually chosen for service. Some owners are even careful to import she-goats from the island Melia, because it is thought that the largest and finest kids are produced there.

[5] “With regard to purchase, my rule is different from the usual practice, as no man sound of mind guarantees that goats (which are never free of fever) are sound of body. And so the bargain is struck with only a few exceptions made, after a formula derived from the code of Manilius: ‘Do you guarantee that the said goats are to-day in good condition and able to drink, and that the title is in proper form?’ There is a remarkable thing about these animals, and even Archelaus is authority for the statement: some shepherds who have watched quite closely claim that goats do not breathe, as other animals do, through the nostrils, but through the ears.

[6] “Of the other four points, I have this to say with regard to feeding: It is better to have the goat stalls face the sunrise in winter, as the animals feel the cold acutely. Such stalls, and in fact all stalls, should be floored with stone or tile, to prevent the goat-house from being wet and muddy. When they have to spend the night outdoors, their pens should face in the same direction, and they should be bedded down with twigs so that they may not be muddied. The care of this animal in the matter of feeding is about the same as that of the sheep, though each has certain peculiarities; [7] thus, the goat prefers wooded glades to meadows, as it eats eagerly the field bushes and crops the undergrowth on cultivated land. Indeed, their name *capra* is derived from *carpere*, to crop. It is because of this fact that in a contract for the lease of a farm the exception is usually made that the renter may not pasture the offspring of a goat on the place. For their teeth are injurious to all forms of growth; and though the astronomers have placed them in the sky, they have put them outside the circle of the twelve signs — there are two kids and a she-goat not far from Taurus. [8] As to breeding, at the close of autumn, while the herd is at pasture, the bucks are driven from it into the goat-houses, as was directed with regard to rams. The female which has conceived drops her kid four months later, during the spring. As to rearing, when the kids reach the age of three months they are turned out and begin to form part of the flock. What can I say of the health of animals which are never healthy? I can only make one remark: that the head goatherds keep written directions as to the remedies to be used for some of their diseases and for flesh wounds which

they frequently receive, as they are always fighting one another with their horns, and as they crop in thorny places. [9] One topic remains — that of number. This is smaller in the goat herd than in the flock, as goats are wanton and scatter widely, while sheep, on the contrary, huddle together and crowd into the same space. Hence in the Ager Gallicus breeders keep numerous herds rather than large ones, because in large herds an epidemic quickly spreads, and this may ruin the owner. [10] A flock of about fifty is considered quite large enough. The experience of the Roman knight, Gaberius, is thought to prove this: He had a place containing 1000 iugera near the city, and hearing from a certain goatherd who drove ten goats to the city that they yielded him a denarius a day per head, he bought 1000 goats, hoping that he would make 1000 denarii a day profit. In which he was sadly mistaken, for within a short time he lost the whole flock by disease. Among the Sallentini, however, and around Casinum, they have herds running as high as 100. As to the proportion of males to females, there is about the same difference of opinion, some (and this is my own practice) keeping one buck to every ten does; others, such as Menas, one to fifteen; and still others, such as Murrius, one to twenty.

[1.1] “But who sails forth from harbour, and preferably from an Italian harbour, to discourse about swine? I need hardly ask, for that Scrofa should be chosen to speak on that subject this surname of his indicates.” “You seem,” said Tremelius in reply, “not to know why I have the nickname Scrofa. That these gentlemen, too, may learn the reason while you are being enlightened, you must know that my family does not bear a swinish surname, and that I am no descendant of Eumaeus. My grandfather was the first to be called Scrofa. He was quaestor to the praetor Licinius Nerva, in the province of Macedonia, and was left in command of the army until the return of the praetor. The enemy, thinking that they had an opportunity to win a victory, began a vigorous assault on the camp. [2] In the course of his plea to the soldiers to seize arms and go to meet them, my grandfather said that he would scatter those people as a sow scatters her pigs; and he was as good as his word. For he so scattered and routed the enemy in that battle that because of it the praetor Nerva received the title of Imperator, and my grandfather earned the surname of Scrofa. Hence neither my great-grandfather nor any of the Tremelii who preceded him was called by this surname of Scrofa; and I am no less than the seventh man of praetorian rank in succession in our family. [3] Still, I will not shrink from the task of telling what I know about swine. For I have been a close student of agriculture since my earliest days, and this matter of swine is of equal interest to me and to you who are large cattle-owners. For who of our people cultivates a farm without keeping swine? and who has not heard that our fathers called him lazy and extravagant who hung in his larder a flitch of bacon which he had purchased from the butcher rather than got from his own farm?

“A man, then, who wishes to keep his herd in good condition should select, first, animals of the proper age, secondly, of good conformation (that is, with

heavy members, except in the case of feet and head), of uniform colour rather than spotted. You should see that the boars have not only these same qualities, but especially that their shoulders are well developed. [4] The breed of swine is determined by their appearance, their litter, and the locality from which they come: from their appearance if both boar and sow are handsome; from their litter if they produce numerous pigs; from the locality if you get them from places where fat rather than thin swine are produced. [5] The formula of purchase usually runs as follows: ‘Do you guarantee that the said swine are sound, and that the title is good, and that I am protected from suits for damage, and that they are not from a diseased herd?’ Some buyers add the stipulation that they have got through with fever and diarrhoea.

“In the matter of feeding, ground proper for this animal is wet, as it likes not only water but even mud. It is for this reason, they say, that wolves, when they catch swine, always drag them to water, because their teeth cannot endure the heat of the flesh. [6] As this animal feeds chiefly on mast, and next on beans, barley, and other grains, this food produces not only fat but a pleasant flavour in the flesh. In summer they are driven to pasture early in the day, and before the heat grows intense they are driven into a shady spot, preferably where there is water; then in the afternoon, when the heat has diminished, they are again turned out to pasture. In winter they are not turned out until the frost has disappeared and the ice has melted. [7] In the matter of breeding, the boars are to be separated out two months ahead. The best time for service is from the beginning of the west wind to the spring equinox, as in this case the litter is produced in summer. For the sow is pregnant for four months and will thus bear her young when the land is rich in food. Sows should not be bred when less than a year old, and it is better to wait until they are twenty months old, so that they will be two years old when they bear. When they once begin bearing it is said that they continue to do so satisfactorily up to the seventh year. [8] At the time of breeding they are driven into muddy lanes and pools, so that they may wallow in the mud; for this is their form of refreshment, as bathing is to human beings. After all the sows have conceived, the boars are again separated. The boar begins to cover at eight months and keeps his vigour up to three years; after which time he begins to deteriorate until he reaches the butcher, the appointed go-between of pork and the populace.

[9] “The Greek name for the pig is ὕς, once called θύς from the verb θύειν, that is, ‘to sacrifice’; for it seems that at the beginning of making sacrifices they first took the victim from the swine family. There are traces of this in these facts: that pigs are sacrificed at the initial rites of Ceres; that at the rites that initiate peace, when a treaty is made, a pig is killed; and that at the beginning of the marriage rites of ancient kings and eminent personages in Etruria, the bride and groom, in the ceremonies which united them, first sacrificed a pig. [10] The ancient Latins, too, as well as the Greeks living in Italy, seem to have had the same custom; for our women, and especially

nurses, call that part which in girls is the mark of their sex porcus, as Greek women call it choeros, meaning thereby that it is a distinctive part mature enough for marriage. There is a saying that the race of pigs is expressly given by nature to set forth a banquet; and that accordingly life was given them just like salt, to preserve the flesh. The Gauls usually make the best and largest flitches of them; it is a sign of their excellence that annually Comacine and Cavarine hams and shoulders are still imported from Gaul to Rome. [11] With regard to the size of the Gallic flitches, Cato uses this language: 'The Insubrians in Italy salt down three and four thousand flitches; in spring the sow grows so fat that she cannot stand on her own feet, and cannot take a step; and so when one is to be taken anywhere it is placed in a wagon.' Atilius of Spain, a thoroughly truthful man and one widely versed in a variety of subjects, used to tell the story that when a sow was killed in Lusitania, a district of Farther Spain, there was sent to the senator Lucius Volumnius a piece of the meat with two ribs attached which weighed •three-and-twenty pounds; and that the meat of that sow was •one foot three fingers thick from skin to bone." [12] "No less remarkable a thing was told me in Arcadia," I remarked; "I recall that I went to look at a sow which was so fat that not only could she not rise to her feet, but actually a shrew-mouse had eaten a hole in her flesh, built her nest, and borne her young. I have heard that the same thing occurred in Venetia."

[13] "It may usually be determined from the first litter which sow is prolific in breeding, as there is not much difference in the number of pigs in the succeeding litters. As to rearing, which is called porculatio, the pigs are allowed to remain with their mothers for two months; in the second month, after they are able to feed, they are removed. Pigs born in winter are apt to grow thin on account of the cold and because the mothers drive them off on account of the scantiness of the milk, and the consequent bruising of their teats by the teeth of the pigs. Each sow should have her separate sty in which to feed her pigs; because she does not drive away the pigs of a strange litter, and so, if they become mixed she deteriorates in breeding. [14] Her year is naturally divided into two parts, as she bears twice a year, being with young for four months and giving suck for two. The sty should be constructed •about three feet high, and a little more than that across, at such a height from the ground that if the sow when pregnant should try to jump out, she will not cast her young. The height of the pen should be such that the swineherd can easily look around it, to prevent the little pigs from being crushed by the mother, and be able to clean the bottom without trouble. The sty should have a door with the lower sill •one and a third feet high, so that the pigs cannot jump over it when the mother leaves the sty. [15] Whenever the swineherd cleans the sty he should always cover the floor with sand, or throw into each sty something to soak up the moisture; and when a sow has young he should feed her more bountifully so that she may more easily supply milk. They are usually fed about two pounds of barley soaked in water; some double this amount,

feeding both morning and evening, if they have no other food to give. [16] Pigs when weaned are by some people no longer called 'sucking-pigs,' but *delici* or *shoats*. On the tenth day after birth they are considered 'pure,' and for that reason the ancients called them *sacres*, because they are said to be fit for sacrifice first at that age. Hence in Plautus's play, the *Menaechmi*, the scene of which is laid in Epidamnus, a character who, thinking that another is mad, wants him to make sacrifice and be cured, asks: 'What's the price of *porci sacres* in this town?' Wine dregs and grape refuse are usually fed them if the farm produces these. [17] When they have outgrown the name of sucking-pigs they are called *nefrendes*, from the fact that they are not able to 'crunch' (*frendere*), that is crush, beans. *Porcus* is an old Greek word, but it is obsolete, as they now use the word *choeros*. At the time of bearing, care is taken to see that the sows drink twice a day for the sake of the milk. The saying is that a sow should bear as many pigs as she has teats; if she bear less she will not pay for herself, and if she bear more it is a portent. [18] It is recorded that the most ancient portent of this kind is the sow of Aeneas at Lavinium, which bore thirty white pigs; and the portent was fulfilled in that thirty years later the people of Lavinium founded the town of Alba. Traces of this sow and her pigs are to be seen even to this day; there are bronze images of them standing in public places even now, and the body of the sow is exhibited by the priests, having been kept in brine, according to their account. [19] A sow can feed eight little pigs at first; but when they have taken on weight it is the practice of experienced breeders to remove half of them, as the mother cannot supply enough milk and the whole of the litter cannot grow fat. The mother is not driven out of the sty except for water during the first ten days after delivery; but after this time they are allowed to range for food in near-by parts of the steading, so that they may come back often and feed their pigs. [20] When these are grown they are allowed to follow the mother to pasture; but when they come home they are separated from the mothers and fed apart, so as to grow accustomed to the lack of the mother's nourishment, a point which they reach in ten days. The swineherd should accustom them to do everything to the sound of the horn. At first they are penned in; and then, when the horn sounds, the sty is opened so that they can come out into the place where barley is spread out. This is spread in a row because in that way less is wasted than if it is heaped up, and more of them can reach it easily. The idea in having them gather at the sound of the horn is that they may not become lost when scattered in wooded country. [21] The best time for castrating the boars is when one year old, and certainly not less than six months; when this is done their name is changed, and they are called 'barrows' instead of boars. As to the health of swine, I shall give but one illustration: if the sow cannot furnish enough milk for the sucking-pigs, toasted wheat should be fed (for raw wheat loosens the bowels), or barley soaked in water, until they are three months old. [22] As to numbers, ten boars are considered enough for 100 sows, and some breeders even lessen this number. The number in a herd varies; for myself I

consider a herd of 100 a reasonable number, but some breeders have larger ones, the number sometimes going as high as 150. Some double the size of the herd, and others have even a larger herd. A rather small herd is less expensive than one too large, as the herdsman requires fewer helpers; and so the breeder determines the size of the herd by his own advantage, and not as he determines the number of boars to keep, as this latter point is derived from nature.”

[5.1] So far he. At this point Quintus Lucienus, the senator, a thoroughly kindly and jovial person, and a friend to all the company, entered and said “Greetings, fellow-citizens of Epirus; for to Scrofa and to our friend Varro, shepherd of the people, I paid my greetings this morning.” One returned his greeting and another chid him for coming late to his appointment; whereupon he remarked: “I’ll see you again presently, my merry men, and bring my skin and whips back with me. But as for you, Murrius, come along as my backer while I am paying my pence to the Lares, so that if they demand them from me later you can bear me witness.” [2] “Tell him while you are going,” said Atticus to Murrius, “how far our conversation has gone and what has not been discussed, so that he may come back ready for his part; and let us meanwhile tack on the second act, on the larger animals.” “That is where my part comes in,” said Vaccius, “since there are cows in it. So I shall give the advantage of the knowledge I have acquired on the subject of the cattle herd, so that he who is ignorant may learn, and he who knows may see where I go wrong.” “Watch your step, Vaccius,” said I; [3] “for the cow should be in the highest esteem among cattle, and especially in Italy, which is supposed to have derived its name from the word for oxen. For the ancient Greeks, according to Timaeus, called bulls *itali*, and the name Italy was bestowed because of the number and beauty of its cattle, and the great number of calves. Others say it is so named from the fact that Hercules chased hither from Sicily a noble bull which was called *italus*. This is man’s partner in his rustic labours and is the servant of Ceres; [4] and hence the ancients so wished his life to be safe that they made it a capital offence to kill one. In this matter Attica is witness as well as Peloponnesus; for it is to this animal that Buzuges owes his fame at Athens, and Bomagiros at Argos.” “I am acquainted,” replied Vaccius, “with the high esteem in which oxen are held, and the fact that many large things are named from them, such as *busycos* (bull fig), *bupais* (bull-boy), *bulimos* (bull hunger), *boopis* (cow-eyed), and that a grape also has the name *bumamma* (cow’s udder). [5] I know, further, that it was this animal into which Jupiter chose to change himself when he carried his beloved Europa over the sea from Phoenicia; that it was this animal which saved the sons of Neptune by Menalippa from being trampled in the stall, when they were infants, by a herd of cattle; further, that it is from the putrefied body of this animal that there spring the sweetest bees, those honey-mothers from which the Greeks therefore call bees ‘the ox-sprung’ (*βουγενεῖς*); and we have the official record that the praetor reported to the Senate at Rome that it was this animal

which said, in Latin, 'Plautius rather than Hirrius.' So be of good cheer; I shall give you as much satisfaction as the author of the *Bugonia* could.

[6] "First: in the race of cattle four stages of life are distinguished, the first that of calf, the second that of yearling, the third that of prime, the fourth that of old; and a distinction of sex is indicated in each sex, in the first by bull-calf and heifer-calf, in the second by bullock and heifer, and in the third and fourth by bull and cow. A sterile cow is called *taura*, and a pregnant cow is called *horda*. It is from the fact that at that time pregnant cows are sacrificed that one of the days in the calendar is called *hordicidia*. [7] One who wishes to buy a herd of cattle should be careful to have animals of such an age that they are sound for bearing calves rather than those which have already reached the age of barrenness. They should be well formed, that is, clean-limbed, square-built, large, with blackish horns, wide foreheads, large black eyes, hairy ears, narrow jaws, somewhat snub-nosed, not humpbacked, but with a slight depression of the spine, spreading nostrils, blackish lips, [8] thick, long neck, with dewlap hanging from it, body well ribbed, broad shoulders, sturdy rump, a long tail hanging down to the ankles, curling somewhat at the end with thick hair, with legs rather short and straight, knees prominent and a good distance apart, feet not wide and not splaying as they walk, the hoofs not widely cloven but with the two toes smooth and of equal size, the skin not hard and rough to touch. The best colour is black, next red, then dun, and then white; for those of the last mentioned colour are most delicate, and those of the first most hardy. [9] Of the other two colours the first is preferable to the second, while both are more common than the black and the white. He should furthermore see that the males be of good breed, and their conformation should be looked to, for their young reproduce the characteristics of the parents. It is also a matter of importance where they are born; thus in Italy many Gallic oxen of good breed are good workers, while the Ligurian are of small account; [10] of foreign cattle those of Epirus are not only the best in all Greece, but are even better than the Italian. Yet some people use cattle of Italian breeds, which they claim excel in size, as offerings, and these they reserve for solemn offerings to the gods. These are doubtless to be preferred for sacrificial purposes because of the splendour of their size and colour; and this is done all the more because white cattle are not so common in Italy as they are in Thrace on the shores of the Black Gulf where there are few of any other colour. In the purchase of oxen which have been broken in, the bargain is in these terms: 'Do you guarantee that the said oxen are sound, and that I am protected from suits for damage?' [11] In buying them unbroken, the formula runs: 'Do you guarantee that the said bullocks are quite sound and of a sound herd, and that I am protected from suits for damage?' Butchers use a somewhat fuller form, following the rule of Manilius, in buying for slaughter; those who buy for sacrifice do not usually demand a guarantee of soundness in the victim.

"Large cattle are most conveniently pastured on wooded land where there is much undergrowth and foliage; and those that spend the winter along the

coast are driven in summer into the leafy hills. In the matter of breeding I usually follow these principles: [12] for one month before they are mated, cows should not have their fill of food and drink, because it is thought that when thin they are in better condition to conceive. On the other hand, I keep the bulls filled with grass, straw, and hay for two months before mating; and I keep them away from the females. I keep the same number of bulls as Atticus — two to every 70 brood cows — one a yearling, the other a two-year-old. I attend to this matter following the rising of the constellation which the Greeks call Lyra, and which our people call Fides — [13] it is only then that I turn the bulls into the herd. The bull shows by the way he dismounts whether a male or female has been conceived by his act: if it is a male he comes down on the right side, and if a female on the left. Why this is true,” he remarked to me, “you who read Aristotle will have to find out. Cows should not be covered which are less than two years old, so that they may be three years old when they bear; and it will be all the better if they are four years old. Most of them continue bearing up to ten years, and some of them even longer. The best time for mating is from the rising of the Dolphin up to forty days or a little more; for cows which conceive at that time drop their calves at the most temperate season, as cows carry their calves for ten months. [14] On this subject I have seen a remarkable statement — that if you turn in a bull immediately after he has been castrated, he can get a calf. The cows should be pastured in grassy and watered ground, and care should be taken not to let them crowd, be struck, or run against one another. As cattle-flies have a way of tormenting them in summer and certain minute insects grow under their tails, some breeders keep them shut up in pens, to keep them from being worried. The pens should be strewn with a bedding of leaves or some such thing, so that they may rest in greater comfort. In summer they should be driven to water twice, in winter once. [15] When they come to the time of calving, fresh fodder should be kept near the stalls for them to nibble at as they go out, for they become dainty. Care should also be taken that the place into which they turned shall not be chilly, for chill and hunger make them grow thin. [16] In the matter of rearing, the following rules should be observed with this kind of animal: Sucklings must not sleep with their dams, as they will be trampled; they should be admitted to their dams in the morning and when they have come back from pasture. When the calves have made some growth, the dams should be relieved by throwing green food before the calves in the pens. These stalls (and this holds good for practically all stalls) should be paved with stones or something of the sort, so that their hoofs may not rot. After the autumnal equinox calves pasture along with their dams. [17] They should not be castrated until they are two years old, because it is hard for them to recover otherwise; while those which are castrated later become tough and worthless. Just as in the case of other herds, there should be a culling once a year, and the culls should be cut out of the herd, as they take up the room of those which can bring in a profit. If a cow has lost her calf she should be given some whose

dams do not give enough milk. Calves six months old are fed wheat bran and barley-meal and tender grass, and care is taken that they drink morning and evening. [18] On the subject of health there are many rules; these have been copied down from Mago's treatise, and I see to it that my head herdsman is reading some of them repeatedly. As to the number of bulls and cows, the rule is that there be, to every sixty cows, one yearling bull and one two-year-old. Some breeders make the number smaller or larger; as, for instance, in Atticus's herd there are two bulls to seventy breeding cows. The number of animals in a herd varies with the owner, some breeders (and I am one of them) considering a hundred a reasonable number. But Atticus has 120, as does Lucienus."

[6.1] So far Vaccius. Then Murrius, who had returned with Lucienus while Vaccius was speaking, said: "I shall speak by preference on the subject of asses, as I am from Reate, where the best and largest are grown; out of this stock I have bred colts here and several times sold them even to Arcadians. [2] One who wishes, then, to start a good herd of asses should first be careful to get males and females of the proper age, so that they both may continue to bring in a profit as long as possible. They should be sturdy, sound in all parts, full-bodied, of good stock, and from those districts from which the best come; this is a point considered by those breeders in Peloponnesus who, by preference, buy in Arcadia, and those in Italy who buy in the neighborhood of Reate. For it does not at all follow that, because the best 'floating' lampreys grow in Sicily and the helops off Rhodes, these fish grow of the same excellence in all seas. There are two species of these animals: the wild ass, called onager, [3] of which there are many herds, as, for instance, in Phrygia and Lycaonia; and the domesticated, such as are all those in Italy. The wild ass is well suited for breeding, because he is easily changed from wild to tame and never changes back from tame to wild. As the young reproduce the qualities of their parents, both sire and dam should be chosen with an eye to their worth. In the matter of transfer of title, they change owners, as do other animals, by purchase and delivery; and there is the usual guarantee of soundness and against liability for damage. [4] The best food for them is spelt and barley bran. They are bred before the solstice, so that they may drop their colts at the same season the next year; for they foal in the twelfth month after conception. Pregnant jennies are relieved of work, as work makes the womb bear a poorer offspring. The male is not kept from work, as he loses vigour from lack of labour. In the matter of foaling about the same rules are followed as in the case of mares. The young are not separated from their dams for a year after birth; but during the next year they are allowed to be with them at night, and are kept loosely tied with a leather halter or the like. In the third year they begin their training for the work for which their owners wish to keep them. [5] There remains the question of number; but there really are no herds of these animals except of those which form pack trains, for the reason that they are usually separated and sent to the mills, or to the fields for hauling, or even

for ploughing where the land is porous, as it is in Campania. The trains are usually formed by the traders, as, for instance, those who pack oil or wine and grain or other products from the region of Brundisium or Apulia to the sea in donkey panniers."

[7.1] "I too," broke in Lucienus, "shall open the barriers as I come, and begin to let out the steeds, and not the stallions only, which I keep for breeding, as Atticus does, one to every ten mares. The females of these Quintus Modius Equiculus, a very gallant gentleman whose father was also a soldier, used to value as highly as the males. Those who wish to establish a herd of horses and mares, as some do in the Peloponnesus and in Apulia, should first have an eye to age; and the following rules are laid down: We are careful to have them not less than three nor more than ten years old. [2] The age of horses and of almost all animals with solid hoof, and in fact of those with horns, is determined by the teeth, the horse being said to drop, at thirty months, first the middle teeth, two upper and as many lower; at the beginning of the fourth year they again cast, this time dropping the same number of those coming next to those which they have lost; and to so-called canine teeth begin to grow. [3] At the beginning of the fifth year they again shed two in each jaw in the same way, as at that time the animal has hollow fresh teeth which fill out in the sixth year, so that in the seventh it usually has a full set of permanent teeth. It is said that there is no way of determining those which are older than this, except that when the teeth become prominent and the brows grey with hollows under them, they determine by looking at him that such a horse is sixteen years old. [4] As to conformation they should be of moderate size, neither over nor under size, and the mares should have broad quarters and bellies. Stallions kept for breeding should be chosen of broad body, handsome, with no part of the body breaking the harmony. [5] What sort of a horse is going to turn out can be determined from the colt: if it has a head not over size and well-proportioned limbs, dark eyes, full nostrils, close-lying ears; mane abundant, dark, slightly curling, with very fine hair falling on the right side of the neck; broad, full chest, broad shoulders, fair-sized barrel, flanks converging downward, broad shoulder-blades, preferably with a double spine or at least with the backbone not prominent, full, somewhat curly tail, legs straight and sloping symmetrically rather inward than outward, the knees round but not large, and hard hoofs. The veins should be visible over the whole body, as a horse of this kind is capable of easy treatment when it is sick. [6] The stock from which they come is of great importance, as there are a number of breeds; hence noted breeds are named from the districts from which they come, as in Greece the Thessalian from Thessaly, in Italy the Apulian from Apulia, and the Rosean from Rosea. It is a sign that the horse will be a good one if, when in pasture with its mates, it vies with them in racing or in other ways to show its superiority; if, when a river is to be crossed by the herd, it runs with the leaders and does not look back at the rest of the herd. The terms of purchase for horses are practically the same as those for cattle and asses, as they change

owners by purchase on the same terms, as laid down in the decisions of Manilius.

[7] “The breeding stud of horses is best fed in meadows on grass, and in stalls and enclosures on dry hay; and when they have foaled, with an additional ration of barley, and with water twice a day. In the matter of breeding, the beginning of mating should be at the vernal equinox and it should continue until the solstice, so that the foal may come at a seasonable time; for it is said that they are born on the tenth day of the twelfth month after conception. Foals which are born after this time are usually defective and unprofitable. [8] When the proper season arrives, the stallion should be admitted twice daily, morning and evening, with the help of the groom — as they call the man who attends to the mating. For with his help, when the mare is tied, the coition takes place more quickly, and the stallions do not, in their eagerness, eject the seed to no purpose. The mares show when they have conceived by defending themselves. If the horse will not cover the mare, the centre of a squill is crushed in water and reduced to the consistency of honey; with this the natural parts of the mare are touched when she is in heat, and on the other hand the nostrils of the horse are touched with what comes from the natural parts of the mare. [9] (Though it is incredible, as it actually happened the following story should be recorded: when a horse could not be induced to mount his dam, the groom covered his head, led him up, and forced him to do so; but when he took the cloth from the horse’s eyes after he had come down, the horse dashed at him and killed him with his teeth.) [10] Care must be taken that the mares, after conceiving, are not worked over hard or kept in cold places, as chill is extremely injurious to those with foal. So in their stalls the ground should be kept free of dampness, the doors and windows should be kept shut, and poles should be placed in the pen to separate each mare, so that they cannot fight one another. A mare with foal should not be over-fed or under-fed. [11] Those who mate their mares every other year claim that they breed for a longer time and that the colts are better; and that those which become pregnant every year are sooner exhausted, just as are fields which are planted every year.

“Within ten days after birth colts should be driven to pasture with their dams, so that the dung may not burn their tender hoofs. When the colts are five months old, on being driven back to the stable they should have spread before them barley-meal ground with bran, and whatever other product of the soil they relish. [12] When they become yearlings they should be fed with barley and bran so long as they suckle. And they should not be removed before the end of two years; and while they are still with the dam they should be handled from time to time, to prevent them from being frightened when they are separated. For the same purpose harness should be hung in the stall, so that the young horses may become accustomed both to the sight of it and to its jingling when it moves. [13] As soon as they have become accustomed to coming up and being handled it is well to let a boy mount them two or three

times, first lying flat on his stomach and then seated. This should be done when the colt is a three-year-old, for at that age it is growing most rapidly, and putting on muscle. Some breeders claim that a young horse can be broken at eighteen months; but it is better to wait until they are three-year-olds; from which time it is customary to feed mixed forage, for this is a most necessary form of purging for horses. It should be fed for ten days, and the horse should be allowed to taste no other food. [14] From the eleventh to the fourteenth day barley should be fed, the amount being increased gradually from day to day; and the amount fed on the fourth day should be continued for the next ten days. After that time he should have gentle exercise, and be rubbed down with oil after he has sweated. If the weather is chilly, a fire should be built in the stall.

[15] “As some horses are fitted for military service, others for hauling, others for breeding, and others for racing, all are not to be judged and valued by the same standards. Thus the experienced soldier chooses his horses by one standard and feeds and trains them in one way, and the charioteer and circus-rider in another; and the trainer who is breaking horses for riding under the saddle or for the carriage does not use the same system as the man who has military service in view; for as on the one hand, in the army, they want spirited horses, so on the other hand they prefer more docile ones for road service. It is for this reason that there has grown up the greatest difference in the matter of castrating horses; for when the testicles have been removed they become more steady for the reason that they no longer have seed. Such horses are called geldings, just as castrated boars are called barrows, and castrated cocks are called capons. [16] In the matter of treatment there are, in the case of horses, a great many symptoms of disease and methods of treatment, and the head groom should have these written out. It is for this reason that in Greece those who treat cattle in general are called by the special name *ἰππίατροι*, ‘horse-doctors.’”

[8.1] While we were thus speaking a freedman comes from Menates to tell us that the cakes had been offered and the sacrifice was made ready; if the gentlemen wished they might come there and perform their sacrifices for themselves. “But,” I said, “I shan’t let you go until you have played out the third act — on mules, dogs, and herdsmen.” “It will take only a short time to discuss them,” said Murrius; “for mules and hinnies are hybrids and grafts, not from roots after their own kind; for the mule is the offspring of a mare and an ass, while the hinny is the offspring of a horse and a jenny; [2] each is useful work, but neither brings any return from young. When an ass colt is newly born it is placed under a mare and becomes fatter on her milk, as they claim that such nourishment is more nutritious than the ass’s milk. They are reared, in addition, on straw, hay, or barley. Special care is also taken of the foster-mother, so the mare may furnish the colt with an abundant supply of milk. A jack so reared may be used for breeding after three years, and because it is accustomed to horses it will not refuse to mate. [3] If you use him at an early

age, he himself tires sooner, and his offspring will be of poorer quality. Those who do not have such a jack, reared on mare's milk, but want a breeding jack, pick one as heavy and handsome as they can find and of good breed — of the Arcadian breed, our ancestors used to say, but of Reatine breed, as we have found by experience; in that district several breeding asses have sold for three hundred and even four hundred thousand sesterces. In purchasing we observe the same rules as in the case of horses, and make the same stipulations in the matter of purchase and acceptance as were named in the case of horses. [4] We feed these chiefly on hay and barley and increase the amount before breeding, so that we may furnish strength from the food for begetting; and we mate them at the same season in which we mate horses, and we are careful also to have them cover the mares with the help of a groom. When a mare drops a horse-mule or a mare-mule we rear it at the teat. [5] If these are born in swampy or damp ground they have soft hoofs; but if they are driven into the mountains in summer, as is done in the district of Reate, their hoofs grow quite hard. In assembling a herd of mules both age and build must be watched — the former that they may be strong enough to bear the labour of hauling, and the latter that they may please the eyes with the appearance; for it is by pairs of these animals that all vehicles are drawn on the roads. [6] You would take my word for this as being an expert from Reate," he remarked to me, "if you did not keep herds of mares at home yourself, and had not sold herds of mules. The so-called hinny is the offspring of a horse and a jenny; smaller than the mule, usually rather redder, with ears like a horse's, but with mane and tail like those of the ass. These are reared and fed just as young horses are, and their age is determined by the teeth."

[9.1] "There is left," said Atticus, "of the discussion of quadrupeds only the topic of dogs; but it is of great interest to those of us who keep fleece-bearing flocks, the dog being the guardian of the flock, which needs such a champion to defend it. Under this head come especially sheep but also goats, as these are the common prey of the wolf, and we use dogs to protect them. In a herd of swine, however, there are some members which can defend themselves, namely, boars, barrows, and sows; for they are very much like wild boars, which have often killed dogs in the forest with their tusks. [2] And why speak about the larger animals? For I know that while a herd of mules was feeding and a wolf came upon them, the animals actually whirled about and kicked him to death; that bulls often stand facing different ways, with their hind-quarters touching, and easily drive off wolves with their horns. As there are, then, two sorts of dogs — the hunting-dog suited to chase the beasts of the forest, and the other which is procured as a watch-dog and is of importance to the shepherd — I shall speak of the latter under nine divisions, according to the scientific division which has been set forth.

[3] "In the first place, they should be procured of the proper age, as puppies and dogs over age are of no value for guarding either themselves or sheep, and sometimes fall a prey to wild beasts. They should be comely of face, of

good size, with eyes either darkish or yellowish, symmetrical nostrils, lips blackish or reddish, the upper lip neither raised too high nor drooping low, stubby jaw with two fangs projecting somewhat from it on the right and left, the upper straight rather than curved, ^[4] their sharp teeth covered by the lip, large head, large and drooping ears, thick shoulders and neck, the thighs and shanks long, legs straight and rather bowed in than out, large, wide paws which spread as he walks, the toes separated, the claws hard and curving, the sole of the foot not horny or too hard, but rather spongy, as it were, and soft; with the body tapering at the top of the thigh, the backbone neither projecting nor swayed, tail thick; with a deep bark, wide gape, preferably white in colour, so that they may the more readily be distinguished in the dark; and of a leonine appearance. ^[5] Bitches, in addition, should have well formed dugs with teats of equal size. Care should also be taken that they be of good breed; accordingly they receive their names from the districts from which they come: Spartans, Epirotes, Sallentines. You should be careful not to buy dogs from huntsmen or butchers — in the latter case because they are too sluggish to follow the flock, and in the other because if they see a hare or a stag they will follow it rather than the sheep. It is better, therefore, to buy from a shepherd a bitch which has been trained to follow sheep, or one that has had no training at all; for a dog forms a habit for anything very easily, and the attachment he forms for shepherds is more lasting than that he forms for sheep. ^[6] Publius Aufidius Pontianus, of Amiternum, had bought some herds of sheep in furthest Umbria, the purchase including the dogs but not the shepherds, but providing that the shepherds should take them to the pastures of Metapontum and to market at Heraclea. When the men who had taken them there had returned home, the dogs, without direction and simply from their longing for their masters, returned to the shepherds in Umbria a few days later, though it was a journey of many days, having lived off the country. And yet not one of those shepherds had done what Saserna, in his book on agriculture, directed: that a man who wanted a dog to follow him should throw him a boiled frog! It is very important that the dogs be all of the same family, as those which are related are the greatest protection to one another. ^[7] The fourth point is that of purchase: possession passes when the dog is delivered by the former owner to the next. With regard to health and liability to damage, the same precautions are taken as in the case of sheep, except that it is advisable to make the following stipulation: some people fix the price of dogs per head, others stipulate that pups go with their mother, others that two pups count as one dog just as usually two lambs count as one sheep, and many that dogs be included which have become accustomed to being together.

^[8] “The food of dogs is more like that of man than that of sheep: they eat scraps of meat and bones, not grass and leaves. Great care must be taken for their supply of food; for hunger will drive them to hunt for food, if it is not provided, and take them away from the flock — ^[9] even if they do not, as some think, come to the point of disproving the ancient proverb, or even go so

far as to enact the story of Actaeon, and sink their teeth in their master. [10] You should also feed them barley bread, but not without soaking it in milk; for when they have become accustomed to eating that kind of food they will not soon stray from the flock. They are not allowed to feed on the flesh of a dead sheep, for fear that the taste will make them less inclined to spare the flock. They are also fed on bone soup and even broken bones as well; for these make their teeth stronger and their mouths of wider stretch, because their jaws are spread with greater force, and the savour of the marrow makes them more keen. Their habit is to eat during the day when they are out with the flocks, and at evening when these are folded. [11] The beginning of breeding is fixed at the opening of spring, for at that time they are said to be 'in heat,' that is, to show their desire for mating. Those that conceive at that time have a litter about the time of the summer solstice, for they usually carry their young for three months. During the period of gestation they should be fed barley bread rather than wheat bread, for they are better nourished on the former and yield a larger supply of milk. [12] In the matter of rearing after birth, if the litter is large you should at once pick those that you wish to keep and dispose of the others. The fewer you leave the better they will grow, because of the abundance of milk. Chaff and other like stuff is spread under them, because they are more easily reared on a soft bedding. The pups open their eyes within twenty days; for the first two months after birth they are not taken from the mother, but are weaned by degrees. Several of them are driven into one place and teased to make them fight, so as to make them more keen; but they are not allowed to tire themselves out, as this makes them sluggish. [13] They are also accustomed to being tied, at first with slight leashes; and if they try to gnaw these they are whipped to keep them from forming the habit of doing this. On rainy days the kennels should be bedded with leaves or fodder, and this for two purposes: to keep them from being muddled, and to keep them from getting chilled. [14] Some people castrate them, because they think that by this means they are less likely to leave the flock; others do not, because they think this makes them less keen. Some people crush filberts in water and rub the mixture over their ears and between their toes, as the flies and worms and fleas make ulcers there if you do not use this ointment. [15] To protect them from being wounded by wild beasts, collars are placed on them — the so-called melium, that is, a belt around the neck made of stout leather with nails having heads; under the nail heads there is sewed a piece of soft leather, to prevent the hard iron from injuring the neck. The reason for this is that if a wolf or other beast has been wounded by these nails, this makes the other dogs also, which do not have the collar, safe. [16] The number of dogs is usually determined by the size of the flock; it is thought to be about right for one dog to follow each shepherd. But the number varies with the circumstances; thus in countries where wild beasts are plentiful there should be more, as is usually the case with those who escort the flocks to summer and winter pastures through distant woodland trails. On the other hand, for a flock

feeding near the steading two dogs to the farm are sufficient. These should be a male and a female, for in this case they are more watchful, as one makes the other more keen, and if one of the two is sick that the flock may not be without a dog.”

[10.1] As he glanced around to see if he had overlooked anything, I remarked: “Your silence gives the cue to another actor; for the remaining scene in this act concerns the number and kind of herdsmen to be kept.” Whereupon Cossinius: “For herds of larger cattle older men, for the smaller even boys; but in both cases those who range the trails should be sturdier than those on the farm who go back to the steading every day. Thus on the range you may see young men, usually armed, while on the farm not only boys but even girls tend the flocks. [2] The herdsmen should be required to stay on the range the entire day and have the herds feed together; but, on the other hand, to spend the night each with his own herd. They should all be under one herd-master; he should preferably be older than the rest and more experienced, as the other herdsmen will be more disposed to take orders from one who surpasses them in both age and knowledge. [3] Still, he should not be so much older that his age will prevent him from being as able to stand hard work; for neither old men nor boys can easily endure the hardships of the trail and the steepness and roughness of the mountains — all of which must be encountered by those who follow the herd, and especially herds of cattle and oats, which like cliffs and woods for pasturage. The men chosen for this work should be of a sturdy sort, swift, nimble, with supple limbs; men who can not only follow the herd but can also protect it from beasts and robbers, who can lift loads to the backs of pack animals, who can dash out, and who can hurl the javelin. [4] It is not every people that is fitted for herding; thus neither a Bastulan nor a Turdulan is suited, while Gauls are admirably adapted, especially for draught cattle. In the matter of purchase there are some six methods of acquiring a legitimate title: by legal inheritance; by receiving, in due form, through mancipation from one who had a legal right to transfer; by legal cession, from one who had the right to cede, and that at the proper time; by right of possession; by purchase at auction from war-booty; and lastly by official sale among other property or in confiscated property. [5] In the purchase of slaves, it is customary for the peculium to go with the slave, unless it is expressly excepted; and for a guarantee to be given that he is sound and has not committed thefts or damage; or, if the transfer is not by mancipation, double the amount is guaranteed, or merely the purchase price, if this be agreed on. They should eat during the day apart, each with his own herd, but in the evening all those who are under one head-herdsman should eat together. The head-herdsman is to see that all equipment needed for the animals and herdsmen, and especially for sustenance of the men and the treatment of the cattle, shall accompany them; for which purpose owners keep pack animals, in some cases mares, in others any animal instead, which can carry a load on its back.

[6] “As to the breeding of herdsmen; it is a simple matter in the case of those who stay all the time on the farm, as they have a female fellow-slave in the steading, and the Venus of herdsmen looks no farther than this. But in the case of those who tend the herds in mountain valleys and wooded lands, and keep off the rains not by the roof of the steading but by makeshift huts, many have thought that it was advisable to send along women to follow the herds, prepare food for the herdsmen, and make them more diligent. [7] Such women should, however, be strong and not ill-looking. In many places they are not inferior to the men at work, as may be seen here and there in Illyricum, being able either to tend the herd, or carry firewood and cook the food, or to keep things in order in their huts. [8] As to feeding their young, I merely remark that in most cases they suckle them as well as bear them.” At the same time, turning to me, he said: “As I have heard you say that you, when you were in Liburnia, saw mothers carrying logs and children at the breast at the same time, sometimes one, sometimes two; showing that our newly-delivered women, who lie for days under their mosquito-nets,[9] “It is quite true,” I replied; “and in Illyricum I have seen something even more remarkable: for it often happens there that a pregnant woman, when her time has come, steps aside a little way from her work, bears her child there, and brings it back so soon that you would say she had not borne it but found it. They have also another remarkable practice: their custom does not refuse to allow women, often as much as twenty years old (and they call them maidens, too), before marriage to mate with any man they please, to wander around by themselves, and to bear children.” [10] (Cossinius resumes), “All directions for caring for the health of human beings and cattle, and all sicknesses which can be treated without the aid of a physician, the head-herdsman should keep in writing. For one who does not know his letters is not fit for the place, because he cannot possibly keep his master’s cattle accounts correctly. The number of herdsmen is determined differently, some having a smaller, some a larger number. [11] My own practice is to have a herdsman to every eighty wool-bearing sheep, while Atticus has one to every hundred. If flocks of sheep are very large (and some people have as many as 1000) you can decrease the number of shepherds more easily than you can in smaller flocks, such as those of Atticus and mine. My own flocks contain 700, and yours, I think, had 800; but still you had one tenth of them rams, as I do. Two men are needed for a herd of fifty mares, and each of these should certainly have for his use a mare which has been broken to the saddle, in those districts where it is customary for the mares to be rounded up and driven to stalls, as is frequently true in Apulia and Lucania.

[11] “As we have completed what we promised,” he said, “let us leave.” “Yes,” said I, “but not until you have added, as was promised, something about supplementary profit from the flock, including under it the milk and the shearing.” (Cossinius continues) “Of all the liquids which we take for sustenance, milk is the most nourishing — first sheep’s milk, and next goat’s milk. Mare’s milk, however, has the greatest purgative effect, secondly ass’s

milk, then cow's milk, and lastly goat's milk. [2] But there are certain differences among these which arise from a difference of pasturage, a difference in the nature of the animal, and a difference in the milking. As affected by pasturage, milk is best for nourishment which comes from animals fed on barley and straw, and, in general, on solid dry food; while that from animals fed on green food is best for purging, and especially if the green food such as purges us when we eat it ourselves. As affected by the nature of the animal, milk from healthy animals and those not yet old is better than if it is the reverse. As affected by milking and birth, the best milk is that which has not been kept too long after milking and which has not been milked immediately after parturition. [3] Of the cheeses which are made from this milk, those made of cow's milk have the most nutriment, but when eaten are discharged with most difficulty; next come those made of sheep's milk, while those made of goat's milk have the least nutriment and are most easily voided. There is also a difference depending on whether the cheeses are soft and fresh or dry and old, as the soft cheeses are more nutritious and less constipating, while the old, dry cheeses are just the opposite. [4] The period for making cheese extends from the rising of the Pleiades in spring until the Pleiades in summer. In spring the milk for cheese making is drawn in the morning, while at other seasons the milking takes place toward midday; but the practice is not entirely uniform because of differences in locality and food. To two congii of milk is added a bit of rennet the size of an olive, to make it coagulate; this is better when made from a hare or a kid than when made from a lamb. Others use, instead of rennet, the milk from the stem of a fig, and vinegar; they also curdle with various other substances — a thing which, in Greek, is sometimes called ὀπόζ, and sometimes δάκρυον." [5] "I should not be surprised," I remarked, "if that is the reason that a fig tree was planted by shepherds near the shrine of the goddess Rumina; you know at that place sacrifice is offered with milk instead of with wine and sucklings. For people used to call the udder rumis, and even to-day we have lambs called subrumi from this word, just as they are called lactantes (sucklings) from lac (milk). Those who sprinkle salt prefer mineral salt to sea salt.

[6] "As to the shearing of sheep, I first am careful to see, before beginning it, whether the sheep have the scab or sores, so that they may be treated if necessary before being sheared. The proper time for shearing is the period from the spring equinox to the solstice, after the sheep have begun to sweat; it is because of this sweat (sudor) that freshly shorn wool is called 'juicy' (sucida). [7] Freshly clipped sheep are rubbed down on the same day with wine and oil, to which some add a mixture of white chalk and hog lard; and if they have been accustomed to wear a jacket, the skin with which they were covered is greased on the inside with the same mixture and placed on them again. If a sheep has been cut during the shearing, the wound is smeared with soft pitch. Sheep with coarse fleece are shorn about the time of the barley harvest, or at other places before the cutting of the hay. [8] Some shear their

sheep twice a year, as is done in Hither Spain, shearing every six months. They undergo the double work on the supposition that more wool is secured by this method — which is the same motive that leads some to mow their meadows twice a year. The more careful farmers spread out cloths and shear the sheep over them to prevent loss of the wool. [9] Calm days are chosen for this work, and on these the shearing is done from about the fourth to the ninth hour. The fleece from a sheep that is clipped when the sun is rather warm is rendered softer by the sweat, as well as heavier and of better colour. When the fleece has been removed and rolled up it is called by some vellus, by others vellimnum; and it may be seen from these words that in the case of wool, plucking was discovered earlier than shearing. Some people pluck the wool even to-day; and these keep the sheep without food for three days before, as the roots of the wool hold less tightly when the sheep are weak.”

[10] “In fact, it is claimed that barbers first came to Italy from Sicily 453 years after the founding of the city of Rome (as is recorded still on a public monument at Ardea), and that they were introduced by Publius Titinius Mena. That there were no barbers in early days is evident from the statues of the ancients, many of which have long hair and a large beard.”

[11] Cossinius resumed: “As the sheep affords a profit from its wool to be used for clothing, so the goat from her hair is of service for nautical purposes, as well as for military engines and for workmen’s equipment. Some barbarous people, too, use their skins for clothing, as, for instance, in Gaetulia and Sardinia. That this usage obtained among the ancient Greeks also is evident from the fact that the old men who appear in the tragedies get their name of diphtheriae from the goat skin, and in comedies those who are engaged in rustic labour, such as the young man in Caecilius’s *Hypobolimaëus*, and the old man in Terence’s *Heautontimorumenos*. [12] Because they have long hair, goats are clipped over a large part of Phrygia; and it is from this that hair-cloth (cilicia) and other fabrics of the kind are made. But it is said that the Cilicians gave the name to it from the fact that this clipping was first practised in Cilicia.”

This was their contribution, and Cossinius found nothing to alter in it. At the same time a freedman of Vitulus, on his way to the city from the park, turned aside to us and said: “I was sent to you, and was on my way to your house to ask you not to make the holiday shorter but to come early.” And so Scrofa and I set out to Vitulus’s place, and the others, my dear Turranius Niger, some for their homes and some to Menates.

BOOK III

[1.1] Though there are traditionally two ways in which men live — one in the country, the other in the city — there is clearly no doubt, Pinnius, that these differ not merely in the matter of place but also in the time at which each had its beginning. Country life is much more ancient — I mean the time when people lived on the land and had no cities. [2] For tradition has it that the oldest of all cities is a Greek one, Thebes in Boeotia, founded by King Ogygus; while the oldest on Roman territory is Rome, founded by King Romulus. For we may now say, with regard to this, with more accuracy than when Ennius wrote:

Seven hundred years are there, a little more or less,
Since glorious Rome was founded, with augury august.”

[3] Thebes, however, which is said to have been founded before the deluge which takes its name from Ogygus, is some 2,100 years old. If, now, you compare this span of time with that early day when fields were first tilled, and men lived in huts and dugouts, and did not know what a wall or a gate was, farmers antedate city people by an enormous number of years. [4] And no marvel, since it was divine nature which gave us the country, and man’s skill that built the cities; since all arts are said to have been discovered in Greece within a thousand years, while there never was a time when there were not fields on earth that could be tilled. And not only is the tilling of the fields more ancient — it is more noble. It was therefore not without reason that our ancestors tried to entice their citizens back from city to the country; for in time of peace they were fed by the country Romans, and in time of war aided by them. [5] It was also not without reason that they called the same earth “mother” and “Ceres,” and thought that those who tilled her lived a pious and useful life, and that they were the only survivors of the stock of King Saturnus. And it is in accordance with this that the sacred rites in honour of Ceres are beyond all others called “Initiations.” [6] The name of Thebes, too, no less clearly shows that the country is more ancient, in that the name given it comes from a type of land, and not from the name of the founder. For the old language, and the Aeolians of Boeotia in Greece as well, use the word *teba* for hill, leaving out the aspirate; and among the Sabines, a country which was settled by the Pelasgians from Greece, up to this day they use the same word; there is a trace of it in the Sabine country on the Via Salaria, not far from Reate, where a slope of a mile in length is called *tebae*. [7] At first, because of their poverty, people practised agriculture, as a rule, without distinction, the descendants of the shepherds both planting and grazing on the

same land; later, as this flocks grew, they made a division, with the result that some were called farmers, and others herdsmen. [8] This matter of herding has a twofold division (though no writer has made the distinction clearly), as the feeding around the steading is one thing, and that on the land is another. The latter is well known and highly esteemed, being also called *pecuaria*, and wealthy men frequently have ranches devoted to it, which they have either leased or bought; while the other, that of the steading, as it seems insignificant, has, by some writers, been brought under the head of agriculture, though it is a matter of feeding; and the subject as a whole has not, so far as I know, been treated as a separate topic by anyone. [9] Hence, as I suggested that there are three divisions of rural economy which are instituted for gainful ends — one of agriculture, a second of animal husbandry, and a third of the husbandry of the steading — I fixed on three books, of which I have written two: the first to my wife Fundania, on agriculture, and the second to Turranius Niger, on animal husbandry. The third book, that on the husbandry of the steading, which remains, I am herewith sending to you, thinking that in view of our nearness and our affection it is to you particularly that I should dedicate it. [10] For just as you had a villa noteworthy for its frescoing, inlaid work, and handsome mosaic floors, but thought it was not fine enough until its walls were adorned also by your writings, so I, that it might be farther adorned with fruit, so far as I could make it so, am sending this to you, recalling as I do the conversations which we held on the subject of the complete villa. And in discussing that subject we shall begin as follows.

[2.1] During the election of aediles, Quintus Axius, the senator, a member of my tribe, and I, after casting our ballots, wished, though the sun was hot, to be on hand to escort the candidate whom we were supporting when he returned home. Axius remarked to me: “While the votes are being sorted, shall we enjoy the shade of the *Villa Publica*, instead of building us one out of the half-plank of our own candidate?” “Well,” I replied, “I think that the proverb is correct, ‘bad advice is worst for the adviser,’ and also that good advice should be considered good both for the adviser and the advised. [2] So we go our way and come to the *Villa*. There we find Appius Claudius, the augur, sitting on a bench so that he might be on hand for consultation, if need should arise. There were sitting at his left Cornelius Merula (‘Blackbird’), member of a consular family, and Fircellius Pavo (‘Peacock’), of Reate; and on his right Minucius Pica (‘Magpie’) and Marcus Petronius Passer (‘Sparrow’). When we came up to him, Axius said to Appius, with a smile: “Will you let us come into your aviary, where you are sitting among the birds?” [3] “With pleasure,” he replied, “and especially you; I still ‘bring up’ those hospitable birds which you set before me a few days ago in your villa at Reate, when I was on my way to lake Velinus in the matter of the dispute between the people of Interamna and those of Reate. But,” he added, “isn’t this villa, which our ancestors built, simpler and better than that elaborate villa of yours at Reate? [4] Do you see anywhere here citrus wood or gold, or vermilion or azure, or any coloured or

mosaic work? At your place everything is just the opposite. Also, while this villa is common property of the whole population, that one belongs to you alone; this one is for citizens and other people to come to from the Campus, and that one is for mares and asses; and furthermore, this one is serviceable for the transaction of public business — for the cohorts to assemble when summoned by the consul for a levy, for the inspection of arms, for the censors to convoke the people for the census.” [5] “Do you really mean, replied Axius, “that this villa of yours on the edge of the Campus Martius is merely serviceable, and isn’t more lavish in luxuries than all the villas owned by everybody in the whole of Reate? Why, your villa is plastered with paintings, not to speak of statues; while mine, though there is no trace of Lysippus or Antiphilus, has many a trace of the hoer and the shepherd. Further, while that villa is not without its large farm, and one which has been kept clean by tillage, this one of yours has never a field or ox or mare. [6] In short, what has your villa that is like that villa which your grandfather and great-grandfather had? For it has never, as that one did, seen a cured hay harvest in the loft, or a vintage in the cellar, or a grain-harvest in the bins. For the fact that a building is outside the city no more makes it a villa than the same fact makes villas of the houses of those who live outside the Porta Flumentana or in the Aemiliana.”

[7] To which Appius replied, with a smile: “As I don’t know what a villa is, I should like you to enlighten me, so that I shall not go wrong from lack of foresight; since I want to buy a villa from Marcus Seius near Ostia. For if buildings are not villas unless they contain the ass which you showed me at your place, for which you paid 40,000 sesterces, I’m afraid I shall be buying a ‘Seian’ house instead of a seaside villa. [8] My friend here, Lucius Merula, made me eager to own this house when he told me, after spending several days with Seius, that he had never been entertained in a villa which he liked more; and this in spite of the fact that he saw there no picture or statue of bronze or marble, nor, on the other hand, apparatus for pressing wine, jars for olive oil, or mills.” [9] Axius turned to Merula and asked: “How can that be a villa, if it has neither the furnishings of the city nor the appurtenances of the country?” “Why,” he replied, “you don’t think that place of yours on the bend of the Velinus, which never a painter or fresco-worker has seen, is less a villa than the one in the Rosea which is adorned with all the art of the stucco-worker, and of which you and your ass are joint owners?” [10] When Axius had indicated by a nod that a building which was for farm use only was as much a villa as one that served both purposes, that of farm-house and city residence, and asked what inference he drew from that admission. “Why,” he replied, “if your place in the Rosea is to be commended for its pasturage, and is rightly called a villa because cattle are fed and stabled there, for a like reason that also should have the name in which a large revenue is derived from pasturing. [11] For if you get a revenue from flocks, what does it matter whether they are flocks of sheep or of birds? Why, is the revenue sweeter on your place from

oxen which give birth to bees than it is from the bees which are busy at their task in the hives of Seius's villa? And do you get more from the butcher for boars born on your place there than Seius does from the market-man for the wild boars from his place?" [12] "Well," replied Axius, "what is there to prevent me from keeping these at my villa at Reate? You don't think that honey is Sicilian if it is produced on Seius's place, and Corsican if it is produced at Reate? And that if mast which has to be bought feeds a boar on his place it makes him fat, while that which is had for nothing on my place makes him thin?" Whereupon Appius remarked: "Merula did not say that you could not have husbandry like Seius's on your place; but I have, with my own eyes, seen that you have not. [13] For there are two kinds of pasturing: one in the fields, which includes cattle-raising, and the other around the farmstead, which includes chickens, pigeons, bees, and the like, which usually feed in the stading; the Carthaginian Mago, Cassius Dionysius, and other writers have left in their books remarks on them, but scattered and unsystematic. These Seius seems to have read, and as a result he gets more revenue from such pasturing out of one villa than others receive from a whole farm." [14] "You are quite right," said Merula; "I have seen there large flocks of geese, chickens, pigeons, cranes, and peafowl, not to speak of numbers of dormice, fish, boars, and other game. His book-keeper, a freedman who waited on Varro and used to entertain me when his patron was away from home, told me that he received, because of such husbandry, more than 50,000 sesterces from the villa every year." When Axius expressed his surprise, I remarked to him: "Doubtless you know my maternal aunt's place in the Sabine country, at the twenty-fourth milestone from Rome on the Via Salaria?" [15] "Of course," he replied; "it is my custom to break the journey there at noon in summer, when I am on my way to Reate from the city, and to camp there at night in winter when I am on my way from there to town." "Well, from the aviary alone which is in that villa, I happen to know that there were sold 5,000 fieldfares, for three denarii apiece, so that that department of the villa in that year brought in sixty thousand sesterces — twice as much as your farm of 200 iugera at Reate brings in." "What? Sixty?" exclaimed Axius, "Sixty? Sixty? You are joking!" [16] "Sixty," I repeated. "But to reach such a haul as that you will need a public banquet or somebody's triumph, such as that of Metellus Scipio at that time, or the club dinners which are now so countless that they make the price of provisions go soaring. If you can't look for this sum in all other years, your aviary, I hope, will not go bankrupt on you; and if fashions continue as they now are, it will happen only rarely that you miss your reckoning. For how rarely is there a year in which you do not see a banquet or a triumph, or when the clubs do not feast?" "Why," said he, "in this time of luxury it may fairly be said that there is a banquet every day within the gates of Rome. [17] Was it not Lucius Abuccius, who is, as you know, an unusually learned man (his writings are quite in the manner of Lucilius), who used to remark likewise that his estate near Alba was always beaten in feeding by his

steading? for his land brought in less than 10,000, and his steading more than 20,000 sesterces. He also claimed that if he had got a villa near the sea, where he wanted one, he would take in more than 100,000 from the villa. Come, did not Marcus Cato, when he took over the guardianship of Lucullus recently, sell the fish from his ponds for 40,000 sesterces?" [18] "My dear Merula," said Axius, "take me, I beg, as your pupil in this villa-feeding." "Certainly," he replied; "I will begin as soon as you promise the minerval." "That is satisfactory to me; you may have it to-day, or I'll pay it time and again from that feeding." "Humph," replied Appius, "the first time some geese or peacocks out of your flock die!" "Well," retorted Axius, "what does it matter if you eat fowls or fish that have died, seeing that you never eat them unless they are dead? But, I pray you," said he, "lead me into the way of the science of villa-husbandry, and set forth its scope and method."

[3.1] Merula began without hesitation: "In the first place, the owner ought to have so clear an idea of those creatures which can be reared or fed in the villa and around it that they may afford him both profit and pleasure. There are three divisions of this science: the aviary, the hare-warren, and the fish-pond. Under the head of aviary I include enclosures for all fowls which are usually reared within the walls of the villa. [2] Under the head of hare-warrens I wish you to understand, not those which our forefathers called by that name — places where there are only hares — but all enclosures which are attached to the villa and keep animals enclosed for feeding. Similarly, by the term fish-pond I mean ponds which keep fish enclosed near the villa, either in fresh or salt water. [3] Each of these divisions may be subdivided into at least two: thus, under the first head, those which are not content with the land only, but need water also, as geese, teal, and ducks. In the same way the second head — that of game — contains its two diverse classes, one under which come the boar, the roe, and the hare, and the second, those which are also outside the villa, such as bees, snails, and dormice. [4] There are likewise two divisions of the third class, the aquatic, inasmuch as fish are kept sometimes in fresh water, sometimes in sea-water. For the three classes formed of these six subdivisions must be secured three classes of craftsmen — fowlers, hunters, fishers — or else you must purchase from these those creatures which you are to preserve by the activity of your own servants during the period of gestation and up to the time of birth, and when they are born to rear and fatten so that they may reach the market. And there are, moreover, certain other creatures which are to be brought into the villa without the use of net by fowler or hunter or fisher, such as dormice, snails, and chickens. [5] The rearing of the last named, chickens, was the first to be attempted within the villa; for not only did Roman soothsayers raise chickens first for their auspices, but also the heads of families in the country. Next came the animals which are kept in an enclosure near the villa for hunting, and hard by it the bee-hives; for from the first bees took advantage of the roof of the villa under the eaves. Thirdly there began to be built fresh-water ponds, to which were carried fish which had been caught

from the streams. [6] Each of these three classes has two stages: the earlier, which the frugality of the ancients observed, and the later, which modern luxury has now added. For instance, first came the ancient stage of our ancestors, in which there were simply two aviaries: the barn-yard on the ground in which the hens fed — and their returns were eggs and chickens — and the other above ground, in which were the pigeons, either in cotes or on the roof of the villa. [7] On the other hand, in these days, the aviaries have changed their name and have become ornithones; and those which the dainty palate of the owner has constructed have larger buildings for the sheltering of fieldfares and peafowl than whole villas used to have in those days. [8] So too in the second division, the warren, your father, Axius, never saw any better game from his hunting than a paltry hare. For in his day there was no great preserve, whereas nowadays people enclose many acres within walls, so as to keep numbers of wild boars and roes. When you bought your place near Tusculum from Marcus Piso,” he added, turning to me, “were there not many wild boars in the ‘hare-warren?’ [9] In the third division, who had a fish-pond, except a fresh-water pond, or kept any fish in it except squali or mugiles? On the other hand what young fop in these days will not tell you that he would as soon have his pond full of frogs as of such fish as these? You remember that Philippus once, when he had turned aside to visit his friend Ummidius at Casinum, was served with a fine pike from your river; he tasted it, spat it out, and exclaimed: ‘I’ll be hanged if I didn’t think it was fish!’ [10] So our generation, with the same extravagance with which it extended the boundaries of its warrens, has thrust its fish-ponds to the sea, and has brought into them whole schools of deep-sea fish. Was it not from these that Sergius Orata (‘Goldfish’) and Licinius Murena (‘Lamprey’) got their names? And, indeed, who does not know, on account of their fame, the fish-ponds of Philippus, Hortensius, and the Luculli? So, then, where do you wish me to begin, Axius?”

[4.1] “Personally,” he replied, “if I may use a military figure, I should like you to begin post principia, that is, with the present rather than the former times, as larger returns are had from peafowl than from chickens. And what is more, I will make no secret of the fact that I want to hear first about the ornithon, because those fieldfares have made the word mean ‘gain’; for those sixty thousand sesterces of Fircellia have set me on fire with greed.”

[2] “There are,” resumed Merula, “two kinds of ornithon; one merely for pleasure, such as our friend Varro has built near Casinum, which has found many admirers, and the other for profit. Of the latter class are the enclosures which those who supply fowl for the market keep, some in the city, others in the country; especially the leased enclosures in the Sabine district, as, because of the nature of the country, large flocks of fieldfares are found there. [3] Lucullus claimed that the aviary which he built on his place near Tusculum, formed by a combination of these two, constituted a third class. Under the same roof he had an aviary and a dining-room, where he could dine

luxuriously, and see some birds lying cooked on the dish and others fluttering around the windows of their prison. But they found it unserviceable; for in it the birds fluttering around the windows do not give pleasure to the eyes to the same extent that the disagreeable odour which fills the nostrils gives offence.

[5.1] "I shall, however, as I suppose you prefer, Axius, discuss the aviary which is built for profit — the place from which fat fieldfares are taken, and not the place where they are taken. Well, there is built a large domed building, or a peristyle covered with tiles or netting, in which several thousand fieldfares and blackbirds can be enclosed; [2] though some breeders add besides other birds which, when fattened, bring a high price, such as ortolans and quails. Into this building water should be conducted through a pipe and allowed to spread preferably through narrow channels which can easily be cleaned (for if the water spreads there in pools, it more easily becomes foul and is not good for drinking), and the superfluous drip-water from these should run out through a pipe, so that the birds may not be troubled by mud. [3] It should have a low, narrow door, and preferably of the kind which they call *coclia*, such as usually are seen in the pit where bullfights are held. The windows should be few, and so arranged that trees and birds outside cannot be seen; for the sight of these, and the longing for them, makes the imprisoned birds grow thin. It should have only enough openings for light to enable the birds to see where to perch, and where the food and water is. It should be faced around the doors and windows with smooth plaster, so that no mice or other vermin can enter anywhere. [4] Around the walls of this building on the inside there should be a number of poles for the birds to perch on; and, in addition, rods sloping from ground to wall, with transverse rods fastened to them in steps at moderate intervals, after the fashion of the balustrades of the theatre or the arena. At the bottom, on the ground, there should be water for them to drink, and here should be placed cakes for their food. These are usually made by kneading a mixture of figs and spelt. Twenty days before the breeder desires to remove fieldfares, he feeds them more liberally, giving larger quantities and beginning to feed them on spelt ground finer. In this building there should be recesses, equipped with several shelves, as a supplement to the perches; [5] it is here, facing the perches, that the caretaker usually keeps on hand the birds which have died in the place, so as to render account to his master. When it become necessary to remove from this aviary birds which are fit for market, they should be taken out and put into a smaller aviary, called the *seclusorium* (coop), which is connected by a door with the larger aviary and better lighted. When he has the number which he desires to take shut up here, he kills them all. [6] The reason for doing this privately in a separate room is to prevent the others, if they should see it, from moping and dying at a time which would be inopportune for the seller. Fieldfares do not rear their young here and there as do the other migratory birds, storks in the field, swallows under the roof [and though their name (*turdi*) is masculine, there are in fact females too; nor is the case otherwise as regards blackbirds

(merulae) — though they have a feminine name, there are also males]. [7] Again, birds being partly migratory, as swallows and cranes, and partly indigenous, as hens and doves, fieldfares belong to the former class, the migratory, and fly yearly across the sea into Italy about the time of the autumnal equinox, and back again whence they came about the spring equinox, as do turtle-doves and quail at another season in vast numbers. The proof of this is seen in the near-by islands of Pontiae, Palmaria, and Pandateria; for when they arrive in these at the first migration, they remain there for a few days to rest, and do the same when they leave Italy for their return across the sea.

[8] “If you put 5,000 birds into this aviary,” said Appius to Axius, “and there comes a banquet and a triumph, you may at once put at high interest that 60,000 sesterces which you want.” Then, turning to me, he said: “Do you now describe that other kind of aviary which I am told you built for your amusement near Casinum, in the construction of which you are reputed to have far surpassed not only the archetype left by its inventor, our friend Marcus Laenius Strabo, our host at Brundisium, who was the first to keep birds penned up in a recess in his peristyle, feeding them through a net covering, but also Lucullus’ huge buildings on his place at Tusculum.” [9] I replied: “I own, near the town of Casinum, a stream which runs through my villa, clear and deep, with a stone facing, 57 feet wide, and requiring bridges for passage from one side of the villa to the other; it is 950 feet in a straight line from the island in the lowest part of the stream, where another stream runs into it, to the upper part of the stream, where the Museum is situated. [10] Along the banks of this stream there runs an uncovered walk 10 feet broad; off this walk and facing the open country is the place in which the aviary stands, shut in on two sides, right and left, by high walls. Between these lies the site of the aviary, shaped in the form of a writing-tablet with a top-piece, the quadrangular part being 48 feet in width and 72 feet in length, while at the rounded top-piece it is 27 feet. [11] Facing this, as it were a space marked off on the lower margin of the tablet, is an uncovered walk with a plumula extending from the aviary, in the middle of which are cages; and here is the entrance to the courtyard. At the entrance, on the right side and the left, are colonnades, arranged with stone columns in the outside rows and, instead of columns in the middle, with dwarf trees; while from the top of the wall to the archway the colonnade is covered with a net of hemp, which also continues from the archway to the base. These colonnades are filled with all manner of birds, to which food is supplied through the netting, while water flows to them in a tiny rivulet. [12] Along the inner side of the base of the columns, on the right side and on the left, and extending from the middle to the upper end of the open quadrangle, are two oblong fish-basins, not very wide, facing the colonnades. Between these basins is merely a path giving access to the tholos, which is a round domed building outside the quadrangle, faced with columns, such as is seen in the hall of Catulus, if you put columns instead of walls. Outside these

columns is a wood planted by hand with large trees, so that the light enters only at the lower part, and the whole is enclosed with high walls. [13] Between the outer columns of the rotunda, which are of stone, and the equal number of slender inner columns, which are of fir, is a space five feet wide. Between the exterior columns, instead of a wall there is a netting of gut, so that there is a view into the wood and the objects in it, while not a bird can get out into it. In the spaces between the interior columns the aviary is enclosed with a net instead of a wall. Between these and the exterior columns there is built up step by step a sort of little bird-theatre, with brackets fastened at frequent intervals to all the columns as bird-seats. [14] Within the nettings are all manner of birds, chiefly songsters, such as nightingales and blackbirds, to which water is supplied by means of a small trench, while food is passed to them under the netting. Below the base of the columns is stone-work rising a foot and nine inches above the platform; the platform itself rises about two feet above a pond, and is about five feet wide, so that the guests can walk in among the benches and the small columns. At the foot of the platform inside, is the pond, with a border a foot wide, and a little island in the middle. Along the platform also docks have been hollowed out as shelters for ducks. [15] On the island is a small column, and on the inside of it is a post, which holds up, instead of a table, a wheel with spokes, in such fashion that on the outer rim, where the felloe usually stands, there is a curved board with raised edges like a tambourine, two and a half feet in width and a palm in height. This is revolved by a single manservant in such a way that everything to drink and eat is placed on it at once and moved around to all the guests. [16] From the side of the platform, on which there are usually coverlets, the ducks come out into the pond and swim about; from this pond a stream runs into the two fish-basins which I have described, and the minnows dart back and forth, while it is so arranged that cold and warm water flows for each guest from the wooden wheel and the table which, as I have said is at the ends of the spokes, by the turning of cocks. [17] Inside, under the dome of the rotunda, the morning-star by day and the evening-star at night circle around near the lower part of the hemisphere, and move in such a manner as to show what the hour is. In the middle of the same hemisphere, running around the axis, is a compass of the eight winds, as in the horologium at Athens, which was built by the Cyrrestrian; and there a pointer, projecting from the axis, runs about the compass in such a way that it touches the wind which is blowing, so that you can tell on the inside which it is."

[18] While we were thus conversing, a shouting arose in the Campus. We old hands at politics were not surprised at this occurrence, as we knew how excited an election crowd could become, but still we wanted to know what it meant; thereupon Pantuleius Parra comes to us, and tells us that a man had been caught, while they were sorting the ballots in the office, in the act of casting ballots into the ballot-box; and that he had been dragged off to the consul by the supporters of the other candidates. Pavo arose, as it was the

watcher for his candidate who was reported to have been arrested.

[6.1] “You may speak freely about peafowl,” said Axius, “since Fircellius has gone; if you should say anything out of the way about them, he would perhaps have a bone to pick with you for the credit of the family.” To whom Merula said: “As to pea-fowl, it is within our memory that flocks of them began to be kept and sold at a high price. From them Marcus Aufidius Lurco is said to receive an income of more than 60,000 sesterces a year. There should be somewhat fewer males than females if you have an eye to the financial returns; but the opposite if you look at the pleasure, for the male is handsomer. [2] They should be pastured in flocks in the fields. Across the water they are said to be reared in the islands — on Samos, in the grove of Juno, and likewise in Marcus Piso’s island of Planasia. For the forming of a flock they are to be secured when they are young and of good appearance; for nature has awarded the palm of beauty to this fowl over all winged things. The hens are not suited for breeding under two years, and are no longer suited when they get rather old. [3] They eat any kind of grain placed before them, and especially barley; so Seius issues a modius of barley a month per head, with the exception that he feeds more freely during the breeding season, before they begin to tread. He requires of his breeder three chicks for each hen, and these, when they are grown, he sells for fifty denarii each, so that no other fowl brings in so high a revenue. [4] He buys eggs, too, and places them under hens, and the chicks which are hatched from these he places in that domed building in which he keeps his peafowl. This building should be made of a size proportioned to the number of peafowl, and should have separate sleeping quarters, coated with smooth plaster, so that no serpent or animal can get in; [5] it should also have an open place in front of it, to which they may go out to feed on sunny days. These birds require that both places be clean; and so their keeper should go around with a shovel and pick up the droppings and keep them, as they are useful for fertilizer and as litter for chicks. [6] It is said that Quintus Hortensius was the first to serve these fowl; it was on the occasion of his inauguration as aedile, and the innovation was praised at that time rather by the luxurious than by those who were strict and virtuous. As his example was quickly followed by many, the price has risen to such a point that the eggs sell for five denarii each, the birds themselves sell readily for 50 each, and a flock of 100 easily brings 40,000 sesterces — in fact, Abuccius used to say that if one required three chicks to every hen, the total might amount to 60,000.

[7.1] Meanwhile Appius’s bailiff comes with a message from the consul that the augurs are summoned, and he leaves the villa. But pigeons fly into the villa, and Merula, pointing to them, remarks to Axius: “If you had ever built a dove-cote you might think these were your doves, wild though they are. For in a dove-cote there are usually two species of these: one the wild, or as some call them, the rock-pigeon, which lives in turrets and gable-ends (*columina*) of the farmhouse — whence the name *columbae* — and these, because of their

natural shyness, hunt for the highest peak of the roof; hence the wild pigeons chiefly hunt for the turrets, flying into them, from the fields and back again, as the fancy takes them. [2] The other species of pigeon is gentler, and being content with the food from the house usually feeds around the doorstep. This species is generally white, while the other, the wild, has no white, but is variously coloured. From these two stocks is bred for profit a third hybrid species; these are put in a place called by some peristeron and by others peristerotrophion, and often a single one of these will contain as many as 5,000. [3] The peristeron is built in the form of a large building, with a vaulted roof; it has one narrow door and windows of the Punic style, or wider ones with double lattice-work, so that the whole interior is light, but so that no snake or other noxious creature can get in. The whole of the walls and chambers in the interior is covered with the smoothest possible plaster made of marble dust, and the exterior is also plastered around the windows, so that no mouse or lizard can crawl into the pigeon nest; for nothing is more timid than a pigeon. [4] Round nests are constructed for each pair, side by side in a row, and as many rows as possible are run from the floor up to the vaulted roof. Each nest should be so constructed as to have an opening large enough to allow only entrance and exit, and on the interior should be three palms in all directions. Under each row there should be fixed a board two palms wide, to serve as an entrance and walk-way. [5] Provision should be made for water to flow in, so that they may have a place to drink and bathe, for these birds are extremely cleanly. So the pigeon-keeper should sweep them out frequently every month; for the droppings which make the place filthy are so well suited for fertilizing that several writers have stated that it is the best kind. He should see to it that any pigeon which has been hurt be treated, and that any dead one be removed, and should remove the squabs which are fit for market. [6] He should also have a place shut off by a net from the rest, to which the brooding birds may be transferred, and from which the mother-birds may be able to fly away from the pigeon-house. This they do for two reasons: first, if they lose their appetite or grow sickly from confinement, as they are refreshed by the open air when they fly over the fields, or secondly for a decoy; for they will themselves return in any case, because of the young they have, unless they are killed by a crow or cut off by a hawk. [7] These birds the pigeon-keepers make a practice of killing by planting two limed twigs in the ground, leaning toward each other, after placing between them, with its legs tied, some animal which hawks are in the habit of chasing; and they are caught in this way, when they have smeared themselves with the lime. You may see that doves do return to a place, from the fact that many people let them loose from their bosoms in the theatre and they return to their homes; and if they did not come back they would not be turned loose. [8] Food is furnished them in troughs running around the walls, which are filled from the outside through pipes. Their favourite foods are millet, wheat, barley, peas, kidney-beans, and vetch. Those who have wild pigeons in turrets and in the tops of their villas should imitate

these methods so far as they can. Those which are placed in the pigeon-house should be of a proper age, neither squabs nor old birds; and there should be an equal number of cocks and hens. [9] Nothing is more prolific than the pigeon; thus, within a period of forty days it conceives, lays, hatches, and brings off its young. And they continue this, too, through practically the entire year, leaving an interval only between the winter solstice and the vernal equinox. Two chicks are born each time, and as soon as they have grown and have their strength they breed along with their mothers. Those who practise the fattening of squabs to increase their selling price, shut them up as soon as they are covered with down; then they stuff them with white bread which has been chewed, twice a day in winter and three times in summer — morning, noon, and evening; in winter they omit the noon feeding. [10] When they begin to have feathers they are left in the nest, with their legs broken, and are left to their mothers so that they can eat the food more freely; for they feed themselves and their young on it all day long. Birds which are reared in this way fatten more quickly than others, and their parents become white. At Rome, if the birds are handsome, of good colour, sound, and of good breed, single pairs sell usually for 200 sesterces; but unusually fine ones sometimes for 1,000 sesterces. When a trader wanted recently to buy such birds at this price from Lucius Axius, a Roman knight, he said he would not sell for less than 400 denarii.” [11] Axius remarked: “If I could buy a ready-made pigeon-house, as I bought an earthenware dove-cote when I wanted one in my town house, I should already have gone to buy it and have sent it to the farmhouse.” “Just as if,” replied Pica, “there weren’t many of them in the city, also. Or doesn’t it seem to you that people who have dove-cotes on their roof-tiles possess pigeon-houses, inasmuch as some of them have equipment worth more than 100,000 sesterces? I suggest that you buy the complete outfit from one of these, and before you build in the country learn here in the city to put in your purse every day the big profit of a penny or two. But go ahead with your subject, Merula.”

[8.1] “For turtle-doves, also,” he resumed, “a place should be built of a size proportioned to the number you wish to raise; and this, too, as was remarked of pigeons, so that it has a door and windows, clear water, walls and cupola covered with plaster. [2] But instead of nests set in the walls it should have brackets or poles in a row, and over these there should be placed small mats of hemp. The bottom row should be not less than three feet from the ground, between the other rows there should be a space of nine inches, with a half-foot interval between the top and the cupola; and the row should be as wide as the bracket can stand out from the wall, as they feed on the brackets day and night. [3] As to food, dry wheat is given them, about a half-modius for 120 turtle-doves, and their quarters are swept out every day so that they may not suffer harm from the dung — and this is also kept for fertilizing the ground. The most suitable time for fattening is about harvest, for at that time their mothers are at their best, when most chicks are being born, these latter being

better for fattening; and hence the income from them is greatest at this time.”

[9.1] “I wish, Merula,” said Axius, “you would tell us of the division of fattening in which I am interested — that of chickens; then if there is anything in the other topics that is worth taking into account we may do so.” “Well, under the term poultry are included three kinds of fowl: the barn-yard, the wild, and the African. [2] Barn-yard fowls are the species which are kept continuously in farmsteads. One who wants to set up a poultry-farm of these — that is, wants to gain a large profit by the exercise of knowledge and care, as the Delians generally have done — should observe especially the following five points: purchase, including the breed and number to secure; breeding, including the manner of mating and laying; eggs, including the manner of sitting and hatching; chicks, including the manner of rearing and the birds by which they are reared; and to these is added, as an appendix, the fifth topic — the method of fattening. [3] Of the three species, the proper name for the female of the barn-yard fowl is hen, for the male is cock, while that of the half-males, which have been castrated, is capon. Cocks are castrated, to make them capons, by burning with a red-hot iron at the lowest part of the leg until it bursts; and the sore which results is smeared with potter’s clay. [4] One who intends to have a complete poultry-farm should, of course, procure all three species, but chiefly the barn-yard fowls. In buying these he should choose hens which are prolific, usually of a reddish plumage, with black wing feathers, toes of uneven length, large heads, upright crest, full-bodied, as these are better fitted for laying. [5] Cocks should be amorous; and this is judged from their being muscular, with comb reddish, beak short, wide, and sharp, eyes yellowish or black, wattles red with a trace of white, neck particoloured or golden, thighs feathered, lower leg short, claws long, tail large, feathers thick; also by their stretching and crowing often, being stubborn in a fight — those which not only do not fear animals which attack the hens but even fight for the hens. [6] In choosing a strain, however, it is not well to go after the Tanagrian, Median, or Chalcidian; these are undoubtedly handsome birds and very well fitted for fighting one another, but they are rather poor for laying. If you wish to raise 200 you should assign them an enclosed place, and on it construct two large connecting hen-houses, facing eastward, each about ten feet in length, one-half smaller in width, and a little less in height. In each of these there should be a window three feet wide and one foot higher; these should be made of withes so spaced as to allow plenty of light to enter, and yet to keep from passing through them any of the things which usually injure fowls. [7] Between the two houses there should be a door through which their keeper, the gallinarius, can enter. In the houses should be run a number of perches sufficient to hold all the hens. Facing the several perches separate nests should be built for them in the wall. In front of it, as I said, should be an enclosed yard, in which they may run during the daytime and dust themselves. In addition there should be a large room for the caretaker to live in, so built that the surrounding walls may be entirely filled with hens’ nests, either built

in the wall or firmly attached; for movement is^o harmful to a sitting hen. [8] In their nests at laying-time chaff should be spread under them; and when they have laid their eggs, the bedding should be removed and other fresh bedding spread, as in old bedding lice and other vermin generally breed, and these keep the hen from resting quietly, the result being that the eggs either develop unevenly or become stale. If you wish the hen to cover the eggs, it is claimed that a sitting should number not more than 25, even if the hen has been so prolific as to lay more, [9] and that the laying is best from the vernal to the autumnal equinox. So eggs which are laid before or after that period, and even the first laid within the period, should not be set; and the eggs which you set should be put under old hens (and such hens should not have sharp beaks or claws) rather than under pullets, as the latter ought to be busy at laying rather than at sitting. They are best fitted for laying when one or two years old. [10] If you are putting peafowl eggs under a hen, you should put the hen's eggs under her only at the beginning of the tenth day of sitting, so that she will hatch them together; for chicks require twice ten days, and peafowl chicks thrice nine. The hens should be shut up so that they may sit day and night, except at the times morning and evening, when food and drink are being given them. [11] The caretaker should go around at intervals of several days and turn the eggs so that they will warm evenly. It is said that you can tell whether eggs are full and fertile or not if you drop them into water, as the empty egg floats, while the full one sinks. Those who shake an egg to find this out make a mistake, as they break up the vital veins in them. The same authorities state that when you hold it up to the light, the one that the light shines through is infertile. [12] Those who wish to keep eggs a considerable time rub them down thoroughly with fine salt or brine for three or four hours, and when this is washed off pack them in bran or chaff. In setting eggs, care is taken that the number be uneven. The caretaker can find out four days after the sitting begins whether the incubating eggs contain the embryo of a chick. If he holds one against a light and observes it to be uniformly clear, the belief is that it should be thrown out and another substituted. [13] The chicks, when hatched, should be taken from the several nests and placed under a hen which has few chicks; and if a few eggs are left they should be taken away from this hen and put under others which have not yet hatched and those which have fewer than [30] chicks; for the batch must not exceed this number. During the first fifteen days there should be fed to the chicks in the morning, on a bed of dust, so that the hard earth may not injure their beaks, a mixture of barley-meal and cress-seed which has been worked up some time before with water, so that when it is eaten it may not swell up in their crops; and they must be kept away from water. [14] When they begin to grow feathers from the rump, the lice must be picked from their heads and necks often, for they frequently waste away because of these. Around their houses stag horns should be burned, to keep snakes from coming in; for the smell of these animals is usually fatal to them. They should be driven out into the sunshine and on to the dung-hill so they

can flutter about, as in that way they grow healthier — [15] not only the chicks but the whole poultry yard, both in summer and whenever the air is mild and it is sunny, with a net spread above them to keep them from flying outside the enclosure, and to keep hawks and the like from flying into it from outside; avoiding heat and cold, each of which is harmful to them. As soon as they have their wing-feathers they should be trained to follow one or two hens, so that the others may be free for laying rather than busied with the rearing of young. [16] They should begin to sit after the new moon, for the sittings which begin before that time usually do not turn out well. They are hatched in about twenty days. As really too much has been said about these barnyard fowls, I shall make up for it by brevity in speaking of the rest.

“Wild hens are found rarely in town and are hardly seen in Rome, except the tamed ones in cages. In appearance they not like these barn-yard fowls of ours, but rather like the African fowl. [17] Birds whose appearance and shape show that they are of unmixed breed are usually displayed in public ceremonies, along with parrots, white blackbirds, and other unusual things of that sort. Usually they do not produce eggs and chicks in farmsteads, but in the forests. It is from these fowls that the island Gallinaria, in the Tuscan Sea off the coast of Italy opposite the Ligurian mountains, Intimilium, and Album Ingaunum, is said to have got its name; others hold that they are the descendants of those barnyard fowls which were carried there by sailors and became wild. [18] The African hens are large, speckled, with rounded back, and the Greeks call them ‘meleagrides.’ These are the latest fowls to come from the kitchen to the dining-room because of the pampered tastes of people. [19] On account of their scarcity they fetch a high price. Of the three species, it is chiefly the barnyard fowls which are fattened. These are shut into a warm, narrow, darkened place, because movement on their part and light free them from the slavery of fat. For this purpose the largest hens are chosen, but not necessarily those which are mistakenly called “Melic”; for the ancients said “Melic” for “Medic,” just as they said “Thelis” for “Thetis.” Those were called so originally which, because of their size, were imported from Media, and the descendants of these; but later on all large hens got the name on account of their likeness. [20] On these hens the feathers are pulled from wings and tail, and they are fattened on pellets of barley-meal, sometimes mixed with darnel flour, or with flax seed soaked in fresh water. They are fed twice a day, and are watched to see, from certain symptoms, that the last food taken has been digested before more is given. When they have eaten, and their heads have been cleaned to prevent their having lice, they are again shut up. This is continued as long as twenty-five days, and at this time they finally become fat. [21] Some breeders fatten them also on wheat bread softened in water mixed with a sound, fragrant wine, which results in making them fat and tender within twenty days. If, in the course of the fattening, they lose their appetites from too much food, the amount fed should be lessened, diminishing in the last ten days in the same proportion as it increased in the first ten, so

that the twentieth day will be equal to the first. The same method is followed in fattening wood-pigeons and making them plump.”

[10.1] “Pass on now,” said Axius, “to that kind of fowl which is not content with any farmstead and land, but wants ponds — the kind you Greek-lovers call amphibious. The place where geese are reared you call by the foreign name of chenoboscion. Scipio Metellus and Marcus Seius have several large flocks of geese.” “Seius,” continued Merula, “in making provision for his flocks of geese, observed the five steps which I have described in the case of chickens, and which had to do with strain, mating, eggs, chicks, and fattening.

[2] His first injunction to his servant was to see in choosing them that they were full-bodied and white, as usually they have goslings like themselves. For there is another species, mottled, which is called ‘wild,’ and these do not like to flock with the others, and are not tamed so easily. [3] The most suitable time for mating, in the case of geese, is after the winter solstice, for laying and sitting from the first of February or March up to the summer solstice. As they usually mate in the water, they are driven into a stream or a pond. Individuals do not lay more than three times in a year, and when they do, square coops should be built for each, about two and a half feet on each side, and these should be carpeted with straw. Their eggs should be distinguished by some mark, as they do not hatch the eggs of another. Usually nine eggs or eleven form a sitting; if fewer are set, five, if more, fifteen. In cold weather they sit thirty days, in warmer weather twenty-five. [4] When they hatch they are allowed to stay with the mother for the first five days; then they are driven out daily, when the weather is good, into meadows, and also into ponds or swamps. Coops are made for them above ground or under it, and not more than twenty goslings are placed in each; and care is taken that these quarters do not have moisture in the ground, and that they do have a soft cushion of straw or some other material, and that weasels cannot get in, or any other harmful beasts. [5] Geese feed in damp places; so a food is sowed which will bring in a profit, and also there is sowed for them an herb which is called *seris*, because this, even when it is dry, if touched by water becomes green. The leaves of this are plucked and fed to them, for if they are driven into the place where it is growing they either ruin it by their trampling or die from over-eating; for they are naturally ravenous. For this reason you must restrain them, for, as often happens in their feeding because of their greed, if they catch hold of a root which they want to pull out of the ground, they break their necks; for the neck is exceedingly weak, just as the head is soft. If there is none of this herb, they should be fed on barley or other grain. When the season for mixed forage comes, this should be fed as I said in regard to *seris*.

[6] While the geese are sitting they should be fed on barley soaked in water. The goslings are fed first on barley-meal or barley for two days, and for the next three on green cress cut fine, soaked in water and turned into a vessel. But after they are shut into the coops or the underground nests, twenty to the nest, as I have said, they are fed on ground barley or mixed forage or tender

grass cut fine. [7] For fattening, goslings are chosen which are about one and one-half months old; these are enclosed in the fattening pen, and there they are fed on a food consisting of barley-meal and flour dampened with water, being surfeited three times a day. After eating, they are allowed the opportunity of drinking as much as they want. When they are treated in this way they become fat in about two months. After every feeding the place is cleaned out; for they like a clean place, and yet never leave any place clean where they have been.

[11] "One who wishes to keep flocks of ducks and build a duck-farm should choose, first, if he has the opportunity, a place which is swampy, for they like this best of all; if this is not available, a place preferably where there is a natural pond or pool or an artificial pond, to which they can go down by steps.

[2] There should be an enclosure in which they can move about, some fifteen feet high, as you saw at Seius's place, closed by one entrance. Around the entire wall on the inside should run a wide ledge, along which, next to the wall, are the covered resting places, and in front of them their vestibule levelled with plastered brickwork. In this is a continuous trough, in which food is placed for them and water is admitted; for in this way they take their food. [3] All the walls are smoothed with plaster, so that no weasel or other beast can get in to harm them; and the entire enclosure is covered with a wide-meshed net, so that an eagle cannot fly in or the ducks fly out. For food they are often given wheat, barley, grape-skins, and sometimes water-crabs and certain aquatic food of that sort. Any ponds in the enclosure should have a large inflow of water, so that it may always be fresh.

[4] "There are also other species not unlike them, such as the teal, coot, and partridge, which, as Archelaus writes, conceive when they hear the voice of the male. These are not stuffed as are those above mentioned, either to increase their fecundity or to improve their flavour, but they become fat by merely feeding them as described. I have finished telling what seems to belong to the first act of the husbandry of the steading."

[12.1] Meanwhile Appius returns, and we are asked by him and he by us what has been said and done. Appius continues: "There follows the second act, which is usually an appendage to the villa and retains its old name of hare-warren because of one part of it — for not only are hares enclosed in it in woods, as used to be the case on an acre or two of land, but also stags and roes on many acres. It is reported that Quintus Fulvius Lippinus has a preserve in the vicinity of Tarquinii of forty iugera, in which are enclosed, not only the animals I have named, but also wild sheep; and an even larger one near Statonia, and some in other places; [2] while in Transalpine Gaul, Titus Pompeius has a hunting preserve so large that he keeps a tract of about four square miles enclosed. In addition to this, in the same enclosure are usually kept places for snails and bee-hives, and also casks in which dormice are kept confined. But the care, increase, and feeding of all these, except the bees, is evident. [3] For everybody knows that walled enclosures in warrens ought to be

covered with plaster and ought to be high — in the one case to make it impossible for a weasel or a badger or other animal to enter, and in the other to keep a wolf from leaping over; and they should have coverts in which the hares may hide in the day-time under the brush and grass, and trees with spreading branches to hinder the swooping of an eagle. [4] Who also does not know that if he points in a few hares, male and female, in a short time the place will be filled? Such is the fecundity of this animal. For place only four in a warren and it is usually filled in a short time; for often, while they have a young litter they are found to have others in the womb. And so Archelaus writes of them that one who wishes to know how old they are should examine the natural openings, for undoubtedly one has more than another. [5] There is a recent practice of fattening these, too, by taking them from the warren and shutting them up in hutches and fattening them in an enclosed space. There are, then, some three species of these: one, this Italian species of ours, with short fore-legs and long hind legs, the upper part of the body dark, belly white, and ears long. This hare is said to conceive even while it is pregnant. In Transalpine Gaul and Macedonia they grow very large; in Spain and in Italy they are medium-sized. [6] Belonging to the second species is the hare which is born in Gaul near the Alps, which usually differs in the fact that it is entirely white; these are not often brought to Rome. To the third species belongs the one which is native to Spain — like our hare in some respects, but with short legs — which is called cony. Lucius Aelius thought that the hare received its name *lepus* because of its swiftness, being *levipes*, nimble-foot. My own opinion is that it comes from an old Greek word, as the Aeolians called it λέπορις. The conies are so named from the fact that they have a way of making in the fields tunnels (*cuniculos*) in which to hide. [7] You should have all these three species in your warren if you can. You surely have two species anyway, I suppose, as you were in Spain for so many years that I imagine the conies followed you all the way from there.

[13.1] “You know, Axius,” Appius continued, “that boars can be kept in the warren with no great trouble; and that both those that have been caught and the tame ones which are born there commonly grow fat in them. For on the place that our friend Varro here bought from Marcus Pupius Piso near Tusculum, you saw wild boars and roes gather for food at the blowing of a horn at a regular time, when mast was thrown from a platform above to the boars, and vetch or the like to the roes.” [2] “Why,” said he, “I saw it carried out more in the Thracian fashion at Quintus Hortensius’s place near Laurentum when I was there. For there was a forest which covered, he said, more than fifty iugera; it was enclosed with a wall and he called it, not a warren, but a game-preserve. In it was a high spot where was spread the table at which we were dining, to which he bade Orpheus be called. [3] When he appeared with his robe and harp, and was bidden to sing, he blew a horn; whereupon there poured around us such a crowd of stags, boars, and other animals that it seemed to me to be no less attractive a sight than when the

hunts of the aediles take place in the Circus Maximus without the African beasts.”

[14.1] “Appius has lightened your task, my dear Merula,” said Axius. “So far as game is concerned, the second act has been completed briefly; and I do not ask for the rest of it — snails and dormice — as that cannot be a matter of great effort.” “The thing is not so simple as you think, my dear Axius,” replied Appius. “You must take a place fitted for snails, in the open, and enclose it entirely with water; for if you do not, when you put them to breed it will not be their young which you have to search for, but the old snails. [2] They have to be shut in, I repeat, with water, so that you need not get a runaway-catcher. The best place is one which the sun does not parch, and where the dew falls. If there is no such natural place — and there usually is not in sunny ground — and you have no place where you can build one in the shade, as at the foot of a cliff or a mountain with a pool or stream at the bottom, you should make an artificially dewy one. This can be done if you will run a pipe and attach to it small teats to squirt out the water in such a way that it will strike a stone and be scattered widely in a mist. [3] They need little food, and require no one to feed them; they get their food, not only in the open while crawling around, but even discover any upright walls, if the stream does not prevent. In fact, even at the dealer’s they keep alive for a long time by chewing the cud, a few laurel leaves being thrown them for the purpose, sprinkled with a little bran. Hence the cook usually doesn’t know whether they are alive or dead when he is cooking them. [4] There are several varieties of snails, such as the small whites, which come from Reate, the large-sized, which are brought from Illyricum, and the medium-sized, which come from Africa. Not that they do not vary in these regions in distribution and size; thus, very large ones do come from Africa — the so-called *solitannae* — so large that 80 quadrantes can be put into their shells; and so in other countries the same species are relatively larger or smaller. [5] They produce innumerable young; these are very small and with a soft shell, but it hardens with time. If you build large islands in the yards, they will bring in a large haul of money. Snails, too, are often fattened as follows: a jar for them to feed in, containing holes, is lined with must and spelt — it should contain holes in order to allow the air to enter, for the snail is naturally hardy.

[15.1] “The place for dormice is built on a different plan, as the ground is surrounded not by water but by a wall, which is covered on the inside with smooth stone or plaster over the whole surface, so that they cannot creep out of it. In this place there should be small nut-bearing trees; when they are not bearing, acorns and chestnuts should be thrown inside the walls for them to glut themselves with. [2] They should have rather roomy caves built for them in which they Campagna bring forth their young; and the supply of water should be small, as they do not use much of it, but prefer a dry place. They are fattened in jars, which many people keep even inside the villa. The potters make these jars in a very different form from other jars, as they run channels

along the sides and make a hollow for holding the food. In such a jar acorns, walnuts, or chestnuts are placed; and when a cover is placed over the jars they grow fat in the dark."

[16.1] "Well," remarked Appius, "the third act of the husbandry of the steading is left — fishponds." "Why third?" inquired Axisus. "Or, just because you were accustomed in your youth not to drink honey-wine at home for the sake of thrift, are we to overlook honey?" "It is the truth he is telling," Appius said to us. [2] "For I was left in straitened circumstances, together with two brothers and two sisters, and gave one of them to Lucullus without a dowry; it was only after he relinquished a legacy in my favour that I, for the very first time, began to drink honey-wine at home myself, though meantime mead was none the less commonly served at banquets almost daily to all guests. [3] And furthermore, it was my right and not yours to know these winged creatures, to whether nature has given so much talent and art. And so, that you may realize that I know bees better than you do, hear of the incredible art that nature has given them. Our well-versed Merula, as he has done in other cases, will tell you of the practice followed by bee-keepers.

[4] "In the first place, bees are produced partly from bees, and partly from the rotted carcass of a bullock. And so Archelaus, in an epigram, says that they are 'the roaming children of a dead cow'; and the same writer says: 'While wasps spring from horses, bees come from calves.' Bees are not of a solitary nature, as eagles are, but are like human beings. Even if jackdaws in this respect are the same, still it is not the same case; for in one there is a fellowship in toil and in building which does not obtain in the other; in the one case there is reason and skill — it is from these that men learn to toil, to build, to store up food. [5] They have three tasks: food, dwelling, toil; and the food is not the same as the wax, nor the honey, nor the dwelling. Does not the chamber in the comb have six angles, the same number as the bee has feet? The geometricians prove that this hexagon inscribed in a circular figure encloses the greatest amount of space. They forage abroad, and within the hive they produce a substance which, because it is the sweetest of all, is acceptable to gods and men alike; for the comb comes to the altar and the honey is served at the beginning of the feast and for the second table. [6] Their commonwealth is like the states of men, for here are king, government, and fellowship. They seek only the pure; and hence no bee alights on a place which is befouled or one which has an evil odour, or even one which smells of sweet perfume. So one who approaches them smelling of perfume they sting, and do not, as flies do, lick him; and one never sees bees, as he does flies, on flesh or blood or fat — so truly do they alight only on objects which have a sweet savour. [7] The bee is not in the least harmful, as it injures no man's work by pulling it apart; yet it is not so cowardly as not to fight anyone who attempts to break up its own work; but still it is well aware of its own weakness. They are with good reason called 'the winged attendants of the Muses,' because if at any time they are scattered they are quickly brought into

one place by the beating of cymbals or the clapping of hands; and as man has assigned to those divinities Helicon and Olympus, so nature has assigned to the bees the flowering untilled mountains. [8] They follow their own king where he goes, assist him when weary, and if he is unable to fly they bear him upon their backs, in their eagerness to serve him. They are themselves not idle, and detest the lazy; and so they attack and drive out from them the drones, as these give no help and eat the honey, and even a few bees chase larger numbers of drones in spite of their cries. On the outside of the entrance to the hive they seal up the apertures through which the air comes between the combs with a substance which the Greeks call *erithace*. They all live as if in an army, sleeping and working regularly in turn, and send out as it were colonies, and their leaders give certain orders with the voice, as it were in imitation of the trumpet, as happens when they have signals of peace and war with one another. But, my dear Merula, that our friend Axius may not waste away while hearing this essay on natural history, in which I have made no mention of gain, I hand over to you the torch in the race.”

[10] Whereupon Merula: “As to the gain I have this to say, which will perchance be enough for you, Axius, and I have as my authorities not only Seius, who has his apiaries let out for an annual rental of 5,000 pounds of honey, but also our friend Varro here. I have heard the latter tell the story that he had two soldiers under him in Spain, brothers named Veianius, from the district near Falerii. They were well-off, because, though their father had left only a small villa and a bit of land certainly not larger than one iugerum, they had built an apiary entirely around the villa, and kept a garden; and all the rest of the land had been planted in thyme, snail-clover, and balm — a plant which some call honey-leaf, others bee-leaf, and some call bee-herb. [11] These men never received less than 10,000 sesterces from their honey, on a conservative estimate, as they said they preferred to wait until they could bring in the buyer at the time they wanted rather than to rush into market at an unfavourable time.” “Tell me, then,” said he, “where I ought to build an apiary and of what sort, so as to get a large profit.” [12] “The following,” said Merula, “is the proper method for building apiaries, which are variously called *melitrophia* and *mellaria*: first, they should be situated preferably near the villa, but where echoes do not resound (for this sound is thought to be a signal for flight in their case); where the air is temperate, not too hot in summer, and not without sun in winter; that it preferably face the winter sunrise, and have near by a place which has a good supply of food and clear water. [13] If there is no natural food, the owner should sow crops which are most attractive to bees. Such crops are: the rose, wild thyme, balm, poppy, bean, lentil, pea, clover, rush, alfalfa, and especially snail-clover, which is extremely wholesome for them when they are ailing. It begins flowering at the vernal equinox and continues until the second equinox. [14] But while this is most beneficial to the health of bees, thyme is best suited to honey-making; and the reason that Sicilian honey bears off the palm is that good thyme is common there. For this

reason some bruise thyme in a mortar and soak it in lukewarm water, and with this sprinkle all the plots planted for the bees. [15] So far as the situation is concerned, one should preferably be chosen close to the villa — and some people place the apiary actually in the portico of the villa, so that it may be better protected. Some build round hives of withes for the bees to stay in, others of wood and bark, others of a hollow tree, others build of earthenware, and still others fashion them of fennel stalks, building them square, about three feet long and one foot deep, but making them narrower when there are not enough bees to fill them, so that they will not lose heart in a large empty space. All such hives are called *alvi*, ‘bellies,’ because of the nourishment (*alimonium*), honey, which they contain; and it seems that the reason they are made with a very narrow middle is that they may imitate the shape of the bees. [16] Those that are made of withes are smeared, inside and out, with cow-dung, so that the bees may not be driven off by any roughness; and these hives are so placed on brackets attached to the walls that they will not be shaken nor touch one another when they are arranged in a row. In this method, a second and a third row are placed below it at an interval, and it is said that it is better to reduce the number than to add a fourth. At the middle of the hive small openings are made on the right and left, by which the bees may enter; [17] and on the back, covers are placed through which the keepers can remove the comb. The best hives are those made of bark, and the worst those made of earthenware, because the latter are most severely affected by cold in winter and by heat in summer. During the spring and summer the bee-keeper should examine them about thrice a month, smoking them lightly, and clear the hive of filth and sweep out vermin. [18] He should further see to it that several chiefs do not arise, for they become nuisances because of their dissensions. Some authorities state also that, as there are three kinds of leaders among bees — the black, the red, and the striped — or as Menecrates states, two — the black and the striped — the latter is so much better that it is good practice for the keeper, when both occur in the same hive, to kill the black; for when he is with the other king he is mutinous and ruins the hive, because he either drives him out or is driven out and takes the swarm with him. [19] Of ordinary bees, the best is the small round striped one. The one called by some the thief, and by others the drone, is black, with a broad belly. The wasp, though it has the appearance of a bee, is not a partner in its work, and frequently injures it by its sting, and so the bees keep it away. Bees differ from one another in being wild or tame; by wild, I mean those which feed in wooded places, and by tame those which feed in cultivated ground. The former are smaller in size, and hairy, but are better workers.

“In purchasing, the buyer should see whether they are well or sick. [20] The signs of health are their being thick in the swarm, sleek, and building uniformly smooth comb. When they are not so well, the signs are that they are hairy and shaggy, as if dusted over — unless it is the working season which is pressing them; for at this time, because of the work, they get tough and thin.

[21] If they are to be transferred to another place, it should be done carefully, and the proper time should be observed for doing it, and a suitable place be provided to which to move them. As to the time, it should be in spring rather than in winter, as in winter it is difficult for them to form the habit of staying where they have been moved, and so they generally fly away. If you move them from a good situation to one where there is no suitable pasturage, they become runaways. And even if you move them from one hive into another at the same place, the operation should not be carried out carelessly, [22] but the hive into which the bees are going should be smeared with balm, which has a strong attraction for them, and combs full of honey should be placed inside not far from the entrance, for fear that, when they notice either a lack of food. . . . He says that when bees are sickly, because of their feeding in the early spring on the blossoms of the almond and the cornel, it is diarrhoea that affects them, and they are cured by drinking urine. [23] Propolis is the name given to a substance with which they build a protectum ('gable') over the entrance opening in front of the hive, especially in summer. This substance is used, and under the same name, by physicians in making poultices, and for this reason it brings even a higher price than honey on the Via Sacra. Erithace is the name given a substance with which they fasten together the ends of the comb (it is a different substance than either honey or propolis) and it is in it that the force of the attraction lies. So they smear with this substance, mixed with balm, the bough or other object on which they want the swarm to settle. [24] The comb is the structure which they fashion in a series of cells of wax, each separate cell having six sides, the same number as that of the feet given to each bee by nature. It is said that they do not gather wholly from the same sources the materials which they bring in for making the four substances, propolis, erithace, comb, and honey. Sometimes what they gather is of one kind, since from the pomegranate and the asparagus they gather only food, from the olive tree wax, from the fig honey, but of a poor quality. [25] Sometimes a double service is rendered, as both wax and food from the bean, the balm, the gourd, and the cabbage; and similarly a double service of food and honey from the apple and wild pear, and still another double service in combination, since they get wax and honey from the poppy. A threefold service, too, is rendered, as food, honey, and wax from the almond and the charlock. From other blossoms they gather in such a way that they take some materials for just one of the substances, other materials for more than one; [26] they also follow another principle of selection in their gathering (or rather the principle follows the bees); as in the case of honey, they make watery honey from one flower, for instance the sisera, thick honey from another, for instance from rosemary; and so from still another they make an insipid honey, as from the fig, good honey from snail-clover, and the best honey from thyme. [27] As drink is a component of food, and as this, in the case of bees, is clear water, they should have a place from which to drink, and this close by; it should flow past their hives, or run into a pool in such a way that it will not rise higher

than •two or three fingers, and in this water there should lie tiles or small stones in such a way that they project a little from the water, so that the bees can settle on them and drink. In this matter great care should be taken to keep the water pure, as this is an extremely important point in making good honey. [28] As it is not every kind of weather that allows them to go far afield for feeding, food should be provided for them, so that they will not have to live on the honey alone at such times, or leave the hives when it is exhausted. So about ten pounds of ripe figs are boiled in six congii of water, and after they are boiled they are rolled into lumps and placed near the hives. Other apiarists have water sweetened with honey placed near the hives in vessels, and drop clean pieces of wool into it through which they can suck, for the double purpose of keeping them from surfeiting themselves with the drink and from falling into the water. A vessel is placed near each hive and is kept filled. Others pound raisins and figs together, soak them in boiled wine, and put pellets made of this mixture in a place where they can come out to feed even in winter.

[29] “The time when the bees are ready to swarm, which generally occurs when the well hatched new brood is over large and they wish to send out their young as it were a colony (just as the Sabines used to do frequently on account of the number of their children), you may know from two signs which usually precede it: first, that on preceding days, and especially in the evenings, numbers of them hang to one another in front of the entrance, [30] massed like a bunch of grapes; and secondly, that when they are getting ready to fly out or even have begun the flight, they make a loud humming sound exactly as soldiers do when they are breaking camp. Those which have gone out first fly around in sight, looking back for the others, which have not yet gathered, to swarm. When the keeper observes that they have acted so, he frightens them by throwing dust on them and by beating brass around them; [31] and the place to which he wishes to carry them, and which is not far away, is smeared with bee-bread and balm and other things by which they are attracted. When they have settled, a hive, smeared on the inside with the same enticing substances, is brought up and placed near by; and then by means of a light smoke blown around them they are induced to enter. When they have moved into the new colony, they remain so willingly that even if you place near by the hive from which they came, still they are content rather with their new home.

[32] “As I have given my views on the subject of feeding, I shall now speak of the thing on account of which all this care is exercised — the profit. The signal for removing the comb is given by the following occurrences . . . if the bees make a humming noise inside, if they flutter when going in and out, and if, when you remove the covers of the hives, the openings of the combs are seen to be covered with a membrane, the combs being filled with honey. [33] Some authorities hold that in taking off honey nine-tenths should be removed and one-tenth left; for if you take all, the bees will quit the hive. Others leave

more than the amount stated. Just as in tilling, those who let the ground lie fallow reap more grain from interrupted harvests, so in the matter of hives if you do not take off honey every year, or not the same amount, you will by this method have bees which are busier and more profitable. ^[34] It is thought that the first season for removing the comb is at the time of the rising of the Pleiades, the second at the end of summer, before Arcturus is wholly above the horizon, and the third after the setting of the Pleiades. But in this case, if the hive is well filled no more than one-third of the honey should be removed, the remainder being left for the wintering; but if the hive is not well filled no honey should be taken out. When the amount removed is large, it should not all be taken at one time or openly, for fear the bees may lose heart. If some of the comb removed contains no honey or honey that is dirty, it should be cut off with a knife. ^[35] Care should be taken that the weaker bees be not imposed upon by the stronger, for in this case their output is lessened; and so the weaker are separated and placed under another king. Those which often fight one another should be sprinkled with honey-water. When this is done they not only stop fighting, but swarm over one another, licking the water; and even more so if they are sprinkled with mead, in which case the odour causes them to attach themselves more greedily, and they drink until they are stupefied. ^[36] If they leave the hive in smaller numbers and a part of the swarm remains idle, light smoke should be applied, and there should be placed near by some sweet-smelling herbs, especially balm and thyme. ^[37] The greatest possible care should be taken to prevent them from dying from heat or from cold. If at any time they are knocked down by a sudden rain while harvesting, or overtaken by a sudden chill before they have foreseen that this would happen (though it is rarely that they are caught napping), and if, struck by the heavy rain-drops, they lie prostrate as if dead, they should be collected into a vessel and placed under cover in a warm spot; the next day, when the weather is at its best, they should be dusted with ashes made of fig wood, and heated a little more than warm. Then they should be shaken together gently in the vessel, without being touched with the hand, and placed in the sun. ^[38] Bees which have been warmed in this way recover and revive, just as happens when flies which have been killed by water are treated in the same way. This should be carried out near the hives, so that those which have been revived may return each to his own work and home."

^[17.1] Meantime Pavo returns to us and says: "If you wish to weigh anchor, the ballots have been cast and the casting of lots for the tribes is going on; and the herald has begun to announce who has been elected aedile by each tribe." Appius arose hurriedly, so as to congratulate his candidate at once and then go on to his home. And Merula remarked: "I'll give you the third act of the husbandry of the steading later, Axius." As they were rising, and we were looking back, because we knew that our candidate was coming also, Axius remarked to me: "I am not sorry that Merula left at this point, ^[2] for the rest is pretty well known to me. There are two kinds of fish-ponds, the fresh and the

salt. The one is open to common folk, and not unprofitable, where the Nymphs furnish the water for our domestic fish; the ponds of the nobility, however, filled with sea-water, for which only Neptune can furnish the fish as well as the water, appeal to the eye more than to the purse, and exhaust the pouch of the owner rather than fill it. For in the first place they are built at great cost, and in the second place they are stocked at great cost, and in the third place they are kept up at great cost. [3] Hirrus used to take in 12,000 sesterces from the buildings around his fish-ponds; but he spent all that income for the food which he gave his fish. No wonder; for I remember that he lent to Caesar on one occasion 2,000 lampreys by weight; and that on account of the great number of fish his villa sold for 4,000,000 sesterces. Our inland pond, which is for the common folk, is properly called ‘sweet,’ and the other ‘bitter’; for who of us is not content with one such pond? Who, on the other hand, who starts with one of the sea-water ponds doesn’t go on to a row of them? [4] For just as Pausias and the other painters of the same school have large boxes with compartments for keeping their pigments of different colours, so these people have ponds with compartments for keeping the varieties of fish separate, as if they were holy and more inviolate than those in Lydia about which, Varro, you used to say that while you were sacrificing, they would come up in schools, at the sound of a flute, to the edge of the shore and the altar, because no one dared catch them (the same time as that at which you saw the dancing islands of the Lydians); just so no cook dares ‘haul these fish over the coals.’ [5] Though our friend Quintus Hortensius had ponds built at great expense near Bauli, I was at his villa often enough to know that it was his custom always to send to Puteoli to buy fish for dinner. [6] And it was not enough for him not to feed from his ponds — nay, he must feed his fish with his own hands; and he actually took more pains to keep his mullets from getting hungry than I do to keep my mules at Rosea from getting hungry, and indeed he furnished them nourishment in the way of both food and drink much more generously than I do in caring for my donkeys. For I keep my very valuable asses with the help of a single stable-boy, a bit of barley, and water from the place; while Hortensius in the first place kept an army of fishermen to supply food, and they were continually heaping up minnows for the larger fish to eat. [7] Besides, he used to buy salted fish and throw them into ponds when the sea was disturbed and on account of bad weather this source of supply of the ponds failed to furnish food, and the live food — the fish which supplies the people with supper — could not be brought ashore with the net.” “You could more easily get Hortensius’s consent to take the carriage mules (mulas) from his travelling-carriage and keep them for your own,” said I, “than take a barbed mullet (mullum) from his pond.” [8] “And,” he continued, “he was no less disturbed over his sick fish than he was over his ailing slaves. And so he was less careful to see that a sick slave did not drink cold water than that his fish should have fresh water to drink. In fact he used to say that Marcus Lucullus suffered from carelessness in this respect, and he looked

down on his ponds because they did not have suitable tidal-basins, and so, as the water became stagnant, his fish lived in unwholesome quarters; [9] while, on the other hand, after Lucius Lucullus had cut through a mountain near Naples and let a stream of sea-water into his ponds, so that they ebbed and flowed, he had no need to yield to Neptune himself in matter of fishing — for he seemed, because of the hot weather, to have led his beloved fish into cooler places, just as the Apulian shepherds are wont to do when they lead their flocks along the cattle-trails into the Sabine hills. But while he was building near Baiae he became so enthusiastic that he allowed the architect to spend money as if it were his own, provided he would run a tunnel from his ponds into the sea and throw up a mole, so that the tide might run into the pond and back to the sea twice a day from the beginning of the moon until the next new moon, and cool off the ponds.”

[10] So far we. Then a noise on the right, and our candidate, as aedile-elect, came into the villa wearing the broad stripe. We approach and congratulate him and escort him to the Capitoline. Thence, he to his home, we to ours, my dear Pinnius, after having had the conversation on the husbandry of the villa, the substance of which I have given you.

F. H. BELVOIR 1918 TRANSLATION

BOOK I

THE HUSBANDRY OF AGRICULTURE

Introduction: the literary tradition of country life

I

Had I leisure, Fundania, this book would be more worthy of you, but I write as best I may, conscious always of the necessity of haste: for, if, as the saying is, all life is but a bubble, the more fragile is that of an old man, and my eightieth year admonishes me to pack my fardel and prepare for the long journey.

You have bought a farm and wish to increase its fertility by good cultivation, and you ask me what I would do with it were it mine. Not only while I am still alive will I try to advise you in this, but I will make my counsel available to you after I am dead. For as it befel the Sibyl to have been of service to mankind not alone while she lived, but even to the uttermost generations of men after her demise (for we are wont after so many years still to have solemn recourse to her books for guidance in interpretation of strange portents), so may not I, while I still live, bequeath my counsel to my nearest and dearest.¹ I will then write three books for you, to which you may have recourse for guidance in all things which must be done in the management of a farm.

And since, as men say, the gods aid those who propitiate them, I will begin my book by invoking divine approval, not like Homer and Ennius, from the Muses, nor indeed from the twelve great gods of the city whose golden images stand in the forum, six male and as many female, but from a solemn council of those twelve divinities who are the tutelaries of husbandmen.

* * * * *

First: I call upon Father Jupiter and Mother Earth, who fecundate all the processes of agriculture in the air and in the soil, and hence are called the great parents.

Second: I invoke the Sun and the Moon by whom the seasons for sowing and reaping are measured.

Third: I invoke Ceres and Bacchus because the fruits they mature are most necessary to life, and by their aid the land yields food and drink.

Fourth: I invoke Robigus and Flora by whose influence the blight is kept from crop and tree, and in due season they bear fruit (for which reason is the annual festival of the *robigalia* celebrated in honour of Robigus, and that of the *floralia* in honour of Flora).²

Next: I supplicate Minerva, who protects the olive; and Venus, goddess of the garden, wherefore is she worshipped at the rural wine festivals.

And last: I adjure Lympha, goddess of the fountains, and Bonus Eventus, god of good fortune, since without water all vegetation is starved and stunted

and without due order and good luck all tillage is in vain.

* * * * *

And so having paid my duty to the gods, I proceed to rehearse some conversations³ concerning agriculture in which I have recently taken part. From them you will derive all the practical instruction you require, but in case any thing is lacking and you wish further authority, I refer you to the treatises of the Greeks and of our own countrymen.

The Greek writers who have treated incidentally of agriculture are more than fifty in number. Those whom you may consult with profit are Hieron of Sicily and Attalus Philometor, among the philosophers; Democritus the physicist; Xenophon the disciple of Socrates; Aristotle and Theophrastus, the peripatetics; Archytas the pythagorean; likewise the Athenian Amphilochochus, Anaxipolis of Thasos, Apollodorus of Lemnos, Aristophanes of Mallos, Antigonos of Cyme, Agathocles of Chios, Apollonius of Pergamum, Aristandrus of Athens, Bacchius of Miletus, Bion of Soli, Chaerestus and Chaereas of Athens, Diodorus of Priene, Dion of Colophon, Diophanes of Nicaea, Epigenes of Rhodes, Evagor of Thasos, Euphronius of Athens, and his namesake of Amphipolis, Hegesias of Maronea, the two Menanders, one of Priene, the other of Heraclaea, Nicesius of Maronea, Pythion of Rhodes. Among the rest whose countries I do not know, are Androtion, Aeschion, Aristomenes, Athenagoras, Crates, Dadis, Dionysius, Euphiton, Euphorion, Eubulus, Lysimachus, Mnaseas, Menestratus, Plentiphanes, Persis, and Theophilus.

All those whom I have named wrote in prose, but there are those also who have written in verse, as Hesiod of Ascræ and Menecrates of Ephesus.

The agricultural writer of the greatest reputation is, however, Mago the Carthaginian⁴ who wrote in the Punic tongue and collected in twenty-eight books all the wisdom which before him had been scattered in many works. Cassius Dionysius of Utica translated Mago into Greek in twenty books (and dedicated his work to the praetor Sextilius), and notwithstanding that he reduced Mago by eight books he cited freely from the Greek authors whom I have named. Diophanes made a useful digest of Cassius in six books, which he dedicated to Deiotarus, King of Bithynia. I have ventured to compress the subject into the still smaller compass of three books, the first on the husbandry of agriculture, the second on the husbandry of live stock and the third on the husbandry of the steading.

From the first book I have excluded all those things which I do not deem to relate immediately to agriculture: thus having first limited my subject I proceed to discuss it, following its natural divisions. My information has been derived from three sources, my own experience, my reading, and what I have heard from others.

Of the definition of agriculture

a. What it is not

II. On the holiday which we call Sementivae I came to the temple of Tellus at the invitation of the Sacristan (I was taught by my ancestors to call him *Aeditumus* but the modern purist tells me I must say *Aedituus*). There I found assembled C. Fundanius, my father-in-law, C. Agrius, a Roman Knight and a disciple of the Socratic school, and P. Agrasius, of the Revenue service: they were gazing on a map of Italy painted on the wall. "What are you doing here?" said I. "Has the festival of the seed-sowing drawn you hither to spend your holiday after the manner of our ancestors, by praying for good crops?" "We are here," said Agrius, "for the same reason that you are, I imagine — because the Sacristan has invited us to dinner. If this be true, as your nod admits, wait with us until he returns, for he was summoned by his chief, the aedile, and has not yet returned though he left word for us to wait for him."

"Until he comes then," said I, "let us make a practical application of the ancient proverb that 'The Roman conquers by sitting down.'"

"You're right," cried Agrius, and, remembering that the first step of a journey is the most difficult,⁵ he lead the way to the benches forthwith and we followed. When we were seated Agrasius spoke up. "You who have travelled over many lands," said he, "have you seen any country better cultivated than Italy?"

"I, for one, don't believe," replied Agrius, "that there is any country which is so intensely cultivated. By a very natural division Eratosthenes has divided the earth into two parts, that facing South and that facing North: and as without doubt the North is healthier than the South, so it is more fertile, for a healthy country is always the most fertile. It must be admitted then that the North is fitter for cultivation than Asia, and particularly is this true of Italy; first, because Italy is in Europe, and, second, because this part of Europe has a more temperate climate than the interior. For almost everlasting winter grips the lands to the North of us. Nor is this to be wondered at since there are regions within the Arctic Circle and at the pole where the sun is not seen for six months at a time. Yea, it is even said that it is not possible to sail a ship in those parts because the very sea is frozen over."

"Would you think it possible," said Fundanius, "for any thing to grow in such a region, and, if it did grow, how could it be cultivated? The tragedian Pacuvius has spoken sooth where he says:

'Should sun or night maintain e'er lasting reign,
Then all the grateful fruits of earth must die,
Nipped by the cold, or blasted by the heat.'

Even here in this pleasant region, where night and day revolve punctually, I am not able to live in summer unless I divide the day with my appointed midday nap. How is it possible to plant or to cultivate or to harvest any thing there where the days and nights are six months long. On the other hand, what useful thing is there which does not only grow but flourish in Italy? What spelt shall I compare with that of Campania? What wheat with that of Apulia?

What wine with that of Falernum? What oil with that of Venafrum? Is not Italy so covered with fruit trees that it seems one vast orchard? Is Phrygia, which Homer calls [Greek: *ampeloessa*], more teeming with vines, or is Argos, which the same poet calls [Greek: *polupuros*] more rich in corn?⁶ In what land does one jugerum produce ten, nay even fifteen, cullei of wine, as in some regions of Italy? Has not M. Cato written in his book of *Origines* ‘That region lying this side of Ariminum and beyond Picenum, which was allotted to colonists, is called Roman Gaul. There in several places a single jugerum of land produces ten cullei of wine.’ Is it not the same in the region of Faventia where the vines are called *tre centaria* because a jugerum yields three hundred amphorae of wine,” and, looking at me, he added, “indeed L. Martius, your chief engineer, said that the vines on his Faventine farm yielded that much.⁷ The Italian farmer looks chiefly for two things in considering a farm, whether it will yield a harvest proportioned to the capital and labour he must invest, and whether the location is healthy. Whoever neglects either of these considerations and despite them proposes to carry on a farm, is a fool and should be taken in charge by a committee of his relatives.⁸ For no sane man is willing to spend on an agricultural operation time and money which he knows he cannot recoup, nor even if he sees a likely profit, if it must be at the risk of losing all by an evil climate.

“But there are here present those who can discourse on this subject with more authority than I, for I see C. Licinius Stolo and Cn. Tremelius Scrofa approaching. It was the ancestor of the first of these who brought in the law for the regulation of land-holding; for the law which forbade a Roman citizen to own more than 500 jugera of land was proposed by that Licinius who acquired the cognomen of Stolo on account of his diligence in cultivating his land: he is said to have dug around his trees so thoroughly that there could not be found on his farm a single one of those suckers which spring up from the ground at the roots of trees and are called *stolones*. Of the same family was that other C. Licinius who, when he was tribune of the people, 365 years after the expulsion of the Kings, first transferred the Sovereign function of law making from the Comitium to the Forum, thus as it were constituting that area the ‘farm’ of the entire people.⁹ The other whom I see come hither is Cn. Tremelius Scrofa, your colleague on the Committee of Twenty for the division of the Campanian lands, a man distinguished by all the virtues and considered to be the Roman most expert in agriculture.¹⁰

“And justly so,” I exclaimed, “for his farms are a more pleasing spectacle to many on account of their clean cultivation than the stately palaces of others;¹¹ when one goes to visit his country place, one sees granaries and not picture galleries, as at the ‘farm’ of Lucullus.¹² Indeed,” I added, “the apple market at the head of the Sacred Way is the very image of Scrofa’s fruit house.”

As the new comers joined us, Stolo inquired: “Have we arrived after dinner is over, for we do not see L. Fundilius who invited us.”

“Be of good cheer,” replied Agrius, “for not only has that egg which indicates the last lap of the chariot race in the games at the circus not yet been removed, but we have not even seen that other egg which is the first course of dinner.¹³ And so until the Sacristan returns and joins us do you discourse to us of the uses or the pleasures of agriculture, or of both. For now the sceptre of agriculture is in your hands, which formerly, they say, belonged to Stolo.”

“First of all,” began Scrofa, “we must have a definition. Are we to be limited in discussing agriculture to the planting of the land or are we to touch also on those other occupations which are carried on in the country, such as feeding sheep and cattle. For I have observed that those who write on agriculture, whether in Greek or Punic or Latin, wander widely from their subject.”

“I do not think that those authors should be imitated in that,” said Stolo, “for I deem them to have done better who have confined the subject to the straitest limits, excluding all considerations which are not strictly pertinent to the subject. Wherefore the subject of grazing, which many writers treat as a part of agriculture, seems to me to belong rather to a treatise on live stock. That the occupations are different is apparent from the difference in the names of those we put in charge of them, for we call one the farmer (*villicus*) and the other the herdsman (*magister pecoris*). The farmer is charged with the cultivation of the land and is so called from the *villa* or farm house to which he hauls in the crops from the fields and from which he hauls them away when they are sold. Wherefore also the peasants say *vea* for *via*, deriving their word for the road over which they haul from the name of the vehicle in which they do the hauling, *vectura*, and by the same derivation *vella* for *villa*, the farm house to and from which they haul. In like manner the trade of a carrier is called *vellatura* from the practice of driving a *vectura*, or cart.”

“Surely,” said Fundanius, “feeding cattle is one thing and agriculture is another, but they are related. Just as the right pipe of the *tibia* is different from the left pipe, yet are they complements because while the one leads, it is to carry the air, and the other follows, it is for the accompaniment.”

“And, to push your analogy further, it may be added,” said I, “that the pastoral life, like the *tibia dextra*, has led and given the cue to the agricultural life, as we have on the authority of that learned man Dicaearchus who, in his *Life of Greece* from the earliest times, shows us how in the beginning men pursued a purely pastoral life and knew not how to plough nor to plant trees nor to prune them; only later taking up the pursuits of agriculture; whence it may be said that agriculture is in harmony with the pastoral life but is subordinate to it, as the left pipe is to the right pipe.”

“Beware,” exclaimed Agrius, “of pushing your musical analogy too far, for you would not only rob the farmer of his cattle and the shepherd of his livelihood but you would even break the law of the land in which it is written that a farmer may not graze a young orchard with that pestiferous animal which astrology has placed in the heavens near the Bull.”

“See here, Agrius,” said Fundanius, “let there be no mistake about this. The law you cite applies only to certain designated kinds of cattle, as indeed there are kinds of cattle which are the foes and the bane of agriculture such as those you have mentioned — the goats — for by their nibbling they ruin young plantations, and not the least vines and olives. But, because the goat is the greatest offender in this respect, we have a rule for him which works both ways, namely: that victims of his family are grateful offerings on the altar of one god but should never come near the fane of another; since by reason of the same hate one god is not willing even to see a goat and the other is pleased to see him killed. So it is that goats found among the vines are sacrificed to Father Bacchus as it were that they should pay the penalty of their evil doing with their lives; while on the contrary nothing of the goat kind is ever sacrificed to Minerva, because they are said to make the olive sterile even by licking it, for their very spittle is poison to the fruit. For this reason goats are never driven into the Acropolis of Athens, except once a year for a certain necessary sacrifice, lest the olive tree, which is said to have its origin there,¹⁴ might be touched by a goat.”

“No kind of cattle,” said I, “are of any use to agriculture except those which aid in the cultivation of the land, as they do when they are yoked to the plough.”

“If this was so,” said Agrasius, “how could we afford to take cattle off the land, since it is from our flocks and herds that we derive the manure which is of the greatest benefit to our purely agricultural operations.”

“On your argument of convenience,” said Agrius, “we might claim that slave dealing was a branch of agriculture, if they were agricultural slaves which we dealt in. The error lies in the assumption that because cattle are good for the land, they make crops grow on the land. It does not follow, for by that reasoning other things would become part of agriculture which have nothing to do with it: as for example spinsters and weavers and other craftsmen which you might keep on your farm.”

“Let us then agree,” said Scrofa, “to exclude live stock from our consideration of the art of agriculture. Does any one want to exclude any thing else?”

“Are we to follow the book of the two Sasernas,” I inquired, “and discuss whether the manufacture of pottery is more related to agriculture than mining for silver or other metals? Doubtless the material comes out of the ground in both cases, but no one claims that quarrying for stone or washing sand has any thing to do with agriculture, so why bring in the potter? It is not a question of what comes out of the land, nor of what can be done profitably on a farm, for if it were it might as well be argued that had one a farm lying along a frequented road and a site on it convenient to travellers, it would be the farmer’s business to build a cross-roads tavern. But surely, however profitable this might prove, it would not make the speculation any part of agriculture. It is not, I repeat, whether the business is carried on on account of the land, nor

out of the land, that it may be classed as a part of agriculture, but only if from planting the land one gains a profit.”

“You are jealous of this great writer,” interrupted Stolo. “Because of his unfortunate potteries you rebuke him captiously and give him no credit for all the admirable things which he says about matters which certainly relate to agriculture.”

At this sally, Scrofa, who knew the book and justly contemned it, smiled, whereupon Agrasius, who thought that he and Stolo alone knew the book demanded of Scrofa a quotation from it.

“Here is his recipe for getting rid of bugs,” said Scrofa. “‘Steep a wild cucumber in water and where-ever you sprinkle it the bugs will disappear,’ and again, ‘Grease your bed with ox gall mixed with vinegar.’”

Fundanius looked at Scrofa. “And yet Saserna gives good advice even if it is in a book on agriculture,” he said.

“Yes, by Hercules,” said Scrofa, “and especially in his recipe for removing superfluous hair, in which he bids you take a yellow frog and stew it down to a third of its size and then rub the body with what is left.”¹⁵

“I would rather cite,” said I, “Sasernas’ prescription for the malady from which Fundanius suffers, for his corns make wrinkles on his brow.”

“Tell me, pray, quickly,” exclaimed Fundanius, “for I had rather learn how to root out my corns than how to plant beet roots.”

“I will tell you,” said Stolo, “in the very words he wrote it, or at least as I heard Tarquenna read it: ‘When a man’s feet begin to hurt he should think of you to enable you to cure him.’”

“I am thinking of you,” said Fundanius, “now cure my feet.”

“Listen to the incantation,” said Stolo.

‘May the earth keep the malady,
May good health remain here.’

Saserna bids you chant this formula thrice nine times, to touch the earth, to spit and be sure that you do it all before breakfast.”

“You will find,” said I, “many other wonderful secrets in Saserna, all equally foreign to agriculture, and so all to be left where they are. But it must be admitted that such digressions are found in many other authors. Does not the agricultural treatise of the great Cato himself fairly bristle with them, as for instance his instructions how to make must cake and cheese cake, and how to cure hams?”

“You forget,” said Agrius, “his most important precept: ‘If you wish to drink freely and dine well in company, you should eat five leaves of raw cabbage steeped in vinegar, before sitting down to the table.’”

b. What agriculture is

III. “And so,” said Agrasius, “as we have agreed upon and eliminated from the discussion all those things which agriculture is not, it remains to discuss what it is. Is it an art, and, if so, what are its principles and its purposes?”

Stolo turned to Scrofa and said: “You are our senior in age, in reputation and in experience, you should speak.” And Scrofa, nothing loath, began as follows:

“In the first place, agriculture is not only an art but an art which is as useful as it is important. It is furthermore a science, which teaches how every kind of land should be planted and cultivated, and how to know what kind of land will produce the largest crops for the longest time.¹⁶”

The purposes of agriculture are profit and pleasure

IV. The elements with which this science deals are the same as those which Ennius says are the elements of the universe — water, earth, air and fire. Before sowing your seed it behooves you to study these elements because they are the origin of all growing things. So prepared, the farmer should direct his efforts to two ends: profit and pleasure,¹⁷ one solid the other agreeable: but he should give the preference to the pursuit of profit.¹⁸ And yet those who have regard for appearances in their farming, as for instance by planting their orchards and olive yards in orderly array, often add not only to the productiveness of the farm but as well to its saleability, and so doubly increase the value of their estate. For of two things of equal usefulness, who would not prefer to buy the better looking?

The farm which is healthiest is the most valuable, for there the profit is certain. On the other hand, on an unhealthy farm, however fertile it may be, misfortune dogs the steps of the farmer. For where the struggle is against Death, there not only is the profit uncertain, but one's very existence is constantly at risk: and so agriculture becomes a gamble in which the farmer hazards both his life and his fortune. And yet this risk can be diminished by forethought, for, when health depends upon climate, we can do much to control nature and by diligence improve evil conditions. If the farm is unhealthy by reason of the plight of the land itself, or of the water supply, or is exposed to the miasma which breeds in some localities, or if the farm is too hot on account of the climate, or is exposed to mischievous winds, these discomforts can be mitigated by one who knows what to do and is willing to spend some money. What is of the greatest importance in this respect is the situation of the farm buildings, their plan and convenience, and what is the aspect of their doors and gates and windows. During the great plague, Hippocrates the physician saved not merely one farm but many cities because he knew this. But why should I summon him as a witness: for when the army and the fleet lay at Corcyra¹⁹ and all the houses were crowded with the sick and dying, did not our Varro here contrive to open new windows to the healthy North wind and close those which gave entrance to the infected breezes of the South, to change doors and to do other such things, and so succeed in restoring his comrades safe and sound to their native land?

The fourfold division of the study of agriculture

V. I have rehearsed the elements and the purposes of agriculture, it now remains to consider in how many divisions this science is to be studied.”

“I have supposed these to be without number,” said Agrius, “when I have read the many books which Theophrastus wrote on *The History of Plants* and *The Causes of Vegetation*.

“These books,” said Stolo, “have always seemed to me to be fitter for use in the schools of the philosophers than in the hands of a practical farmer. I do not mean to say that they do not contain many things which are both useful and practical. However that may be, do you rather explain to us the divisions in which agriculture should be studied.”

“There are four chapters for the study of agriculture, of the highest practical importance,” resumed Scrofa, “namely:”

1 What are the physical characteristics of the land to be cultivated, including the constitution of the soil;

2 What labour and equipment are necessary for such cultivation;

3 What system of farming is to be practised;

4 What are the seasons at which the several farming operations are to be carried out.

Each of these four chapters may be divided in at least two subdivisions:

The first into (*a*) a study of the soil, and (*b*) a survey of the buildings and stabling.

The second into an enquiry as to (*c*), the men who will carry on the farming operations, and (*d*) the implements they will require.

The third into (*e*) the kind of work to be planned, and (*f*) where that work is to be done.

The fourth into what relates (*g*) to the annual revolution of the sun, and (*h*) the monthly revolution of the moon.

I will speak of the four principal parts first, and then in detail of the eight subdivisions.

1 CONCERNING THE FARM ITSELF

How conformation of the land affects agriculture

VI. Four things must be considered in respect of the physical characteristics of the farm: its conformation, the quality of the soil, its extent, and whether it is naturally protected. The conformation is either natural, or artificial as the result of cultivation, and may be good or bad in either case. I will speak first of natural conformation, of which there are three kinds: plain, hill and mountain — although there is a fourth kind made up of a combination of any two or all three of those mentioned, as may be seen in many places. A different system of cultivation is required for each of these three kinds of farms, for without doubt that which is suited for the hot plain would not suit the windy mountain, while a hill farm enjoys a more temperate climate than either of the other two kinds and so demands its own system of cultivation. These distinctions are most apparent when the several characteristic conformations are of large extent, as for example the heat and the humidity are greater in a broad plain, like that of Apulia, while on a mountain like Vesuvius the climate is usually fresher and so more healthy. Those who cultivate the lowlands feel the effects of their climate most in summer, but they are able to do their planting earlier in the spring, while those who dwell in the mountains suffer most from their climate in winter, and both sow and reap at later seasons. Frequently the winter is more propitious to those who dwell in the plains because then the pastures are fresh there and the trees may be pruned more readily. On the other hand the summer is more kindly in the mountains for then the upland grass is rich when the pastures of the plains are burnt, and it is more comfortable to cultivate the trees in a keen air.

A lowland farm is best when it is gently sloping rather than absolutely flat, because on a flat farm water cannot run off and so forms swampy places. But it is a disadvantage to have the surface too rolling because that causes the water to collect and form ponds.

Certain trees, like the fir and the pine, flourish most in the mountains on account of the eager air, while in this region where it is more temperate the poplars and the willows thrive best. Again the arbut and the oak prefer the more fertile lands, while the almond and the fig trees love the lowlands.²⁰ The growth on the low hills takes on more of the character of the plains, on the high hills that of the mountains. For these reasons the kind of crops to be planted must be suited to the physical characteristics of the farm, as grain for the plains, vines for the hills and forests for the mountains.

All these considerations should be weighed separately with reference to each of the three kinds of conformation.

VII. "It seems to me," said Stolo, "that, so far as concerns the natural situation of a farm, Cato's opinion is just. He wrote, you will recall, that the

best farm was one which lay at the foot of a mountain looking to the South.”

Scrofa resumed: “So far as concerns the laying out of the farm, I maintain that the more appearances are considered the greater will be the profit, as, for instance, orchards should be planted in straight lines arranged in quincunxes and at a reasonable distance apart. It is a fact that, because of their unintelligent plan of planting, our ancestors made less wine and corn to the acre than we do. The point is that if each plant is set with due reference to the others they occupy less land and are less likely to screen from one another the influence of the sun and the moon and the air. This may be illustrated by an experiment: you can press a parcel of nuts with their shells on into a measure having only two thirds of the capacity of what is required to contain them after they have been cracked, because the shells keep them naturally compacted. When trees are planted in rows the sun and the moon have access to them equally from all sides, with the result that more raisins and olives are developed and then mature more quickly, a double result with the double consequence of a larger crop of must and oil and a greater profit.”

How character of soil affects agriculture

“We will now take up the second consideration in respect of the physical characteristics of a farm, namely: the quality of the soil, which partly, if not entirely, determines whether it is considered a good or a bad farm: for on this depends what crops can be planted and harvested and how they should be cultivated, as it is not possible to plant everything successfully on the same soil. For one soil is suitable for vines, another for corn, and others for other things. In the island of Crete, near Cortynia, there is said to be a plane tree which does not lose its leaves even in winter — a phenomenon due doubtless to the quality of the soil. There is another of the same kind in Cyprus, according to Theophrastus. Likewise within sight of the city of Sybaris (which is now called Thurii) stands an oak having the same characteristic. Again at Elephantine neither the vines nor the fig trees lose their leaves, something that never happens with us. For the same reason many trees bear fruit twice a year, as do the vines near the sea at Smyrna, and the apples in the fields of Consentinium. The effect of soil appears also from the fact that those plants which bear most profusely in wild places produce better fruit under cultivation. The same explanation applies to those plants which cannot live except in a marshy place, or indeed in the very water: they are even nice about the kind of water, some grow in ponds like the reeds at Reate, others in streams like the alders in Epirus, some even in the sea like the palms and the squills of which Theophrastus writes. When I was in the army, I saw in Transalpine Gaul, near the Rhine, lands where neither the vine, nor the olive, nor the pear tree grew, where they manured their fields with a white chalk which they dug out of the ground:²¹ where they had no salt, either mineral or marine, but used in place of it the salty ashes obtained from burning a certain kind of wood.”

Stolo here interrupted. “You will recall,” he said, “that Cato in comparing

the different kinds of soil, ranked them by their merit in nine classes according to what they would produce, of which the first was that on which the vine would grow a plentiful supply of good wine; the second that fit for an irrigated garden; the third for an osier bed; the fourth for an olive yard; the fifth for a meadow; the sixth for a corn field; the seventh for a wood lot; the eighth for a cultivated orchard, and the ninth for a mast grove."

"I know he wrote that," replied Scrofa, "but every one does not agree with him. There are some who put a good pasture first, and I am among them."

Our ancestors were wont to call them not *prala*, as we do, but *parata* (because they are always ready for use). The sedile Caesar Vopicus, in pleading a cause before the Censors, once said that the prairie of Rosea was the nurse of Italy, because if one left his surveying instruments there on the ground over night they were lost next day in the growth of the grass.²²

(*A digression on the maintenance of vineyards*)

VIII. There be those who assert that the cost of maintaining a vineyard eats up the profit. What kind of vineyard? I ask. For there are several: in one the vines grow on the ground without props, as in Spain; in another, which is the kind common in Italy, the vines climb and are trained either separately on props or one with another on a trellis, which last is what is called marrying the vine. There are four kinds of trellis in use — made out of poles, of reeds, of ropes and of vines themselves, which are in use respectively in Falerum, in Arpinum, in Brundisium and in Mediolanum. There are two methods of training the vine on trellises, one upright, as is done in the country of Canusium; the other crossed and interwoven, as is the practice generally throughout Italy. If one obtains the material for his trellises from his own land, the expense of maintaining that kind of vineyard is negligible, nor is it burdensome if the material is procured from the neighbourhood. Such trellis material, as has been described, can be grown at home by planting willows, reeds and rushes, or some thing of that kind; but if you propose to rely on the vines to form their own trellis, then you must plant an *arbustum* where the vines can be trained on trees, such as maples, which the inhabitants of Mediolanum use for that purpose; or fig trees, on which the people of Canusium train their vines. Likewise there are four kinds of props used for the cultivation of unwedded vines; first, the planted post, which is called *ridicum* and is best when fashioned out of oak or juniper; second, poles cut in the swamp, and the more seasoned they are the longer they will last, but it is the practice to reset them upside down when they rot out in the ground; third, for lack of some thing better, a bundle of reeds tied together and thrust into a pointed tube of baked clay, which is then planted in the ground and serves to preserve the reeds from water rot; the fourth is what may be called the natural prop, when vines are swung from tree to tree. Vines should be trained to the height of a man and the interval between the props should be sufficient to give room for a yoke of oxen to plough. The least expensive kind of a vineyard is that which brings wine to the jug without the aid of any sort of prop. There are

two of this kind, one in which the earth serves as a bed for the grapes, as in many places in Asia, and where usually the foxes share the crop with man;²³ or, if mice appear, it is they who make the vintage, unless you put a mouse trap in every vine, as they do on the island of Pandataria. The other kind of vineyard, is that where each shoot which promises to bear grapes is lifted from the earth and supported about two feet off the ground by a forked stick: by this means the grapes, as they form, learn to hang as it were from a branch and do not have to be taught after the vintage; they are held in place with a bit of cord or by that kind of tie which the ancients called a *cestus*. As soon as the farmer sees the vintagers turn their backs he carries these props under cover for the winter so that he may use them another year without expense for that account. In Italy the people of Reate practise this custom.

Thus there are as many methods of cultivating the vine as there are kinds of soil. For where the land is wet the vine must be trained high because when wine is being made and matured on the vine, it needs sun, not water — as when it is in the cup! For this reason it was, I think, that first the vine was made to grow on trees.

Of the different kinds of soil

IX. It is expedient then, as I was saying, to study each kind of soil to determine for what it is, and for what it is not, suitable. The word *terra* is used in three senses: general, particular and mixed. It is a general designation when we speak of the orb of the earth, the land of Italy or any other country. In this designation is included rock and sand and other such things. In the second place, *terra* is referred to particularly when it is spoken of without qualification or epithet. In the third place, which is the mixed sense, when one speaks of *terra* as soil — that in which seeds are sown and developed; as for example, clay soil or rocky soil or others. In this sense there are as many kinds of earth as there are when one speaks of it in the general sense, on account of the mixtures of substances in it in varying quantities which make it of different heart and strength, such as rock, marble, sand, loam, clay, red ochre, dust, chalk, gravel, carbuncle (which is a condition of soil formed by the burning of roots in the intense heat of the sun); from which each kind of soil is called by a particular name, in accordance with the substances of which it is composed, as a chalky soil, a gravelly soil, or what ever else may be its distinguishing quality. And as there are different varieties of soil so each variety may be subdivided according to its quality, as, for example, a rocky soil is either very rocky, moderately rocky or hardly rocky at all. So three grades may be made of other mixed soils. In turn each of these three grades has three qualities: some are very wet, some very dry, some moderate. These distinctions are of the greatest importance in respect of the crops, for the skilled husbandman plants spelt rather than wheat in wet land, and on dry land barley rather than spelt, in medium land both. Furthermore there are still more subtle distinctions to be made in respect of all these kinds of soil, as for example it must be considered in respect of loam, whether it is white loam or

red loam, because white loam is unfit for nursery beds, while red loam is what they require. But the three great distinctions of quality of soil are whether it is lean or fat, or medium. Fat soils are apparent from the heavy growth of their vegetation, and the lean lie bare; as witness the territory of Pupinia (in Latium), where all the foliage is meagre and the vines look starved, where the scant straw never stools, nor the fig tree blooms, while for the most part the trees are as covered with moss as are the arid pastures. On the other hand, a rich soil like that of Etruria reveals itself heavy with grain and forage crops and its umbrageous trees are clean of moss. Soil of medium strength, like that near Tibur, which one might say is rather hungry than starved, repays cultivation in proportion as it takes on the quality of rich land.”

“Diophanes of Bithynia,” said Stolo, “was very much to the point when he wrote that the best indication of the suitability of soil for cultivation can be had either from the soil itself or from what grows in it: so one should ascertain whether it is white or black, if it is light and friable when it is dug, whether its consistency is ashy, or too heavy: or it can be tested by evidence that the wild growth upon it is heavy and fruitful after its kind.²⁴ But proceed and tell us of your third division, which relates to the measurement and laying out of the farm.”

Of the units of area used in measuring land

X. Scrofa resumed: “Every country has its own system for measuring land. In Further Spain the unit of area is the *jugum*, in Campania the *versus*, here in the Roman country and among the Latins it is the *jugerum*. They call a *jugum* the area which a pair of oxen can plough in a day. The *versus* is one hundred feet square: the *jugerum* is the area containing two square *actus*: the *actus quadratus* or *acnua*, as it is called by the Latins, measuring 120 feet in width and as much in length.²⁵ The smallest fraction of a *jugerum* is called a *scripulum* and is ten feet square. From this base the surveyors some times call the butts of land which exceed a *jugerum unciae* (twelfths) or *sextantes* (seventy seconds) or some other such duodecimal division, for the *jugerum* contains 288 *scripula*, like the ancient pound weight which was in use before the Punic wars. Two *jugera*, which Romulus first made the headright and which thus became the unit of inheritance, are called an *haeredium*:²⁶ later one hundred *haeredia* were called a *centuria*, which is 2,400 *unciae* square. Four *centuriae* adjoining, so that there are two on each side, are called a *saltus* in the distribution of the public lands.”

Of the considerations on building a steading

a. Size

XI. As the result of faulty surveys of the farm it often happens that the steading is constructed either too small or too large for the farm, a mistake which in either case is of prejudice both to the property and its revenue. If one builds too large or too many buildings he is eaten up by the expense of maintenance, while if one builds less than the farm requires the harvest is lost, for there is no doubt that the largest wine cellar must be provided for that farm

on which the vintages are largest, or granary, if it is a grain farm.

b. Water supply

If possible, the steading should be so built that it shall have water within the walls, or certainly near at hand: it is preferable that this should be derived from a spring, or, if not, then from an unfailing stream. If no running water is available a cistern should be constructed within doors, and a pond in the open, the one for the use of the men, the other for the use of the cattle.

c. Location, with regard to health

XII. When you plan to build, try your best to locate the steading at the foot of a wooded hill where the pastures are rich, and turn it so as to catch the healthiest prevailing breeze. The best situation is facing the east so to secure shade in summer and sun in winter. But if you must build on the bank of a river, take care that you do not let the steading face the river, for it will be very cold in winter and unhealthy in summer. Like precautions must be taken against swampy places for the same reasons and particularly because as they dry, swamps breed certain animalculae which cannot be seen with the eyes and which we breathe through the nose and mouth into the body where they cause grave maladies.”²⁷

“But,” said Fundanius, “suppose I inherited a farm like that, what should I do to avoid the malady you describe?”

“The answer to that question is easy,” said Agrius. “You should sell the farm for what you can get for it: and if you can’t sell it, give it away.”

Scrofa resumed: “Take care to avoid having the steading face the direction from which disagreeable winds blow, yet you should not build in a hollow. High ground is the best location for a steading: for by ventilation all noxious gases are dissipated, and the steading is healthier if exposed to the sun all day: with the further advantage that any insects which may be bred in or brought upon the premises are either blown away or quickly perish where there is no damp. Sudden rains and overflowed streams are dangerous to those who have their steadings in low or hollow places, and they are more at the hazard of the ruthless hand of the robber because he is able to take advantage of those who are unprepared. Against either of these risks the higher places are safer.”

d. Arrangement

XIII. In arranging the steading, see that the cattle are put where they will be warm in winter. Such crops as wine and oil should be housed below ground in cellars, or rather in jars placed in such cellars, while dry crops like beans, and hay, are best stored on high board floors. A rest room should be provided for the comfort of the hands where they can gather after the day’s work or for protection from cold or heat and there recruit themselves in quiet. The room of the overseer should be near the entrance to the farm house so that he may know who comes in and who goes out during the night, and what they bring in or out, especially if there is no gate-keeper. The kitchen also should be near the overseer’s room because there in winter is great activity before daylight when food is being prepared and eaten. Good sized sheds should be built in

the barn yard for the wagons and other implements which might be damaged by the rain. For while they may be kept safe from the thief within the gates, yet if they are exposed to the weather they will be lost nevertheless. It is better to have two barn yards for a large farm. The inner court should contain a cistern like a little fish pond into which the drainage from the eaves may collect: as here the cattle and swine and geese can drink and bathe in summer when they are driven in from work or pasture. In the outer court there should be another pond where you can handle lupines and such other things as must be soaked in water. This exterior court yard should be strewn thick with straw and chaff, which, by being trampled under the feet of the cattle, becomes the handmaid of the farm by reason of the service it renders when it is hauled out. Every farm should have two manure pits, or one divided into two parts; into one division should be put the new manure from the barn, in the other the old manure which is ready for use on the farm: for new manure is not as good as that which is well rotted.²⁸ The manure pit is more serviceable when its sides and top are protected from the sun by leaves and branches, for the sun draws out from the manure those elements which the land requires; for this reason experienced farmers sprinkle water on their manure pits, and so largely preserve its quality: here too some establish the privies for the slaves. One should build a barracks (what we call a *nubilarium* because it affords protection from the weather) and it should be large enough to contain under its roof the entire crop of the farm: this should be placed near the threshing floor and left open only on the side of the threshing floor, so that while threshing you may conveniently throw out the corn and if it begins to cloud up then quickly throw it back again under shelter. There should be windows in this barracks on the side most fitted for ventilation.”

“A farm would be more of a farm,” said Fundanius, “if the buildings were constructed with reference to the diligence of our ancestors rather than the luxury of their descendants. For they built for use, while we build to gratify an unbridled luxury. Their barns were bigger than their houses, but the contrary is often the case today. Then a house was praised if it had a good kitchen, roomy stables and a cellar for wine and oil fitted, according to the custom of the country, with a floor draining into a reservoir, into which the wine can flow when, as often happens after the new wine has been laid by, the fermentation of the must bursts both Spanish butts and our own Italian tuns. In like manner our ancestors equipped a country house with whatever other things were necessary to agriculture, but now on the contrary it is the effort to make such a house as vast and as elegant as possible, and we vie with those palaces which men like Metellus and Lucullus have built, to the detriment of the very state itself: in them the effort is to contrive summer dining rooms fronting the cool east, and those designed for use in winter facing the western sun, rather than, as the ancients did, to adjust their windows with regard chiefly to the cellars, since wine in casks keeps best when it is cool, while oil craves warmth. For this reason also it would seem that the best place to put a

house is on a hill, if nothing obstructs it.”

Of the protection of farm boundaries

a. Fences

XIV. “Now,” resumed Scrofa, “I will speak of fences, which are constructed for the protection of the farm or for dividing the fields. There are four kinds of such barriers: natural, dead wood, military and masonry. The first is the natural fence of live hedge, consisting of planted shrubs or thorns, and, as it has roots, runs no risk from the flaming torch of the passing traveller who may be inclined to mischief. The second kind is built of the wood of the country, but is not alive. It is made either of palings placed close together and wattled with twigs, or posts placed at some distance apart and pierced to receive the ends of rails, which are generally built two or three to the panel, or else of trunks of trees laid on the ground and joined in line. The third, or military fence, consists of a ditch and a mound: but such a ditch should be so constructed to collect all the rain water, or it should be graded to drain the surface water off the farm. The mound is best when constructed close adjoining the ditch, or else it should be steep so that it will be difficult to scale. It is customary to construct this kind of fence along the public roads or along streams. In the district of Crustumeria one can see in many places along the via Salaria ditches and mounds constructed as dikes against damage by the river (Tiber).²⁹ Mounds are some times built without ditches and are called walls, as in the country around Reate. The fourth and last kind of fence is of built up masonry. There are usually four varieties: those of cut stone, as in the country around Tusculum; those of burned brick, as in Gaul; those of unburned brick as in the Sabine country; those of gravel concrete,³⁰ as in Spain and about Tarentum.”

b. Monuments

XV. Lacking fences, the more discreet establish the boundaries of their property, or of their sowings, by blazed trees, and so prevent neighbourhood quarrels and lawing about corners. Some plant pines around their boundaries, as my wife did on her Sabine farm, or cypresses, as I have on my property on Vesuvius.³¹ Others plant elms, as many have done in the district of Crustumeria: indeed, for planting in plains where it flourishes there is no tree which can be set out with such satisfaction or with more profit than the elm, for it supports the vine and so fills many a basket with grapes, yields its leaves to be a most agreeable forage for flocks and herds, and supplies rails for fences and wood for hearth and oven.

“And now,” said Scrofa, “I have expounded my four points upon the physical characteristics of a farm, which were, its conformation, the quality of the soil, its extent and layout, its boundaries and their protection.”

Of the considerations of neighbourhood

XVI. It remains to discuss the conditions outside the farm itself, for the character of the neighbourhood is of the utmost importance to agriculture on account of the necessary relations with it. There are four considerations in this

respect also, namely: whether the neighbourhood bears a bad reputation; whether it affords a market to which our products can be taken and whence we can bring back what we may require at home; whether there is a road or a river leading to that market, and, if so, whether it is fit for use; and fourth whether there is in our immediate vicinity any thing which may be to our advantage or disadvantage. Of these four considerations the most important is whether the neighbourhood bears a bad reputation: for there are many farms which are fit for cultivation but not expedient to undertake on account of the brigandage in the neighbourhood, as in Sardinia those farms which adjoin Oelium, and in Spain those on the borders of Lusitania.

On the second point those farms are the most profitable which have opportunities in the vicinity for marketing what they raise and buying what they must consume: for there are many farms which must buy corn or wine or what ever else they lack, and not a few which have a surplus of these commodities for sale. So in the suburbs of a city it is fitting to cultivate gardens on a large scale, and to grow violets and roses and many other such things which a city consumes, while it would be folly to undertake this on a distant farm with no facilities for reaching the market. So, again, if there is nearby a town or a village or even the well furnished estate of a rich man where you can buy cheap what you require on the farm, and where you can trade your surplus of such things as props and poles and reeds, your farm will be more profitable than if you had to buy at a distance; nay, more profitable even than if you were able to produce all you require at home: because in this situation you can make annual arrangements with your neighbours to furnish on hire the services of physicians, fullers and blacksmiths to better advantage than if they were your own: for the death of a single such skilled slave wipes out the entire profit of a farm. In carrying on the operation of a vast estate, the rich can afford to provide such servants for every department of the work: for if towns and villages are far distant from the farm, they supply blacksmiths and all other necessary craftsmen and keep them on the place, in order to prevent the hands from leaving the farm and spending working days in going leisurely to and from the shop when they might more profitably be engaged on what should be done in the fields. So Saserna's book lays down the rule that "No one may leave the farm except the overseer, the butler, or such a one as the overseer sends on an errand. If any one disobeys this rule, he shall be punished for it, but if he disobeys a second time the overseer shall be punished." This rule may be better stated that no one should leave the farm without the approval of the overseer, and, without the consent of the master, not even the overseer, for more than a day at a time, but in no event more frequently than the business of the farm requires.

On the third point, conveniences of transportation make a farm more profitable, and these are whether the roads are in such condition that wagons can use them smoothly, or whether there are rivers nearby which can be navigated. We know that each of these means of transportation is available to

many farms.

The fourth point, which is concerned with how your neighbour has planted his land, also relates to your profits: because if he has an oak forest near your boundary, you cannot profitably plant olives in that vicinity, for the oak is so perverse in its effect upon the olive that not only will your trees bear less but they will even avoid the oaks and bend away from them until they are prostrate on the ground, as the vine is wont to do when planted near vegetables. Like the oak, a grove of thickly planted full grown walnut trees renders sterile all the surrounding land.

2 CONCERNING THE EQUIPMENT OF A FARM

XVII. I have spoken of the four points of husbandry which relate to the land to be cultivated and also of those other four points which have to do with the outside relations of that land: now I will speak of those things which pertain to the cultivation of the land. Some divide this subject into two parts, men and those assistants to men without which agriculture cannot be carried on. Others divide it into three parts, the instruments of agriculture which are articulate, inarticulate and mute: the articulate being the servants,³² the inarticulate the draught animals, and the mute being the wagons and other such implements.

Of agricultural labourers

All men carry on agriculture by means of slaves or freemen or both. The freemen who cultivate the land do so either on their own account, as do many poor people with the aid of their own children, or for wages,³³ as when the heaviest farm operations, like the vintage and the harvest, are accomplished with the aid of hired freemen: in which class may be included those bond servants whom our ancestors called *obaerati*, a class which may still be found in Asia, in Egypt and in Illyricum. With respect to the use of freemen in agriculture, my own opinion is that it is more profitable to use hired hands than one's own slaves in cultivating unhealthy lands, and, even where the country is salubrious, they are to be preferred for the heaviest kind of farm work, such as harvesting and storing grapes and corn. Cassius has this to say on the subject: 'Select for farm hands those who are fitted for heavy labour, who are not less than twenty-two years of age and have some aptitude for agriculture, which can be ascertained by trying them on several tasks and by enquiring as to what they did for their former master.' Slaves should be neither timid nor overconfident. The foreman should have some little education, a good disposition and economical habits, and it is better that they should be some what older than the hands, for then they will be listened to with more respect than if they were boys. It is most important to choose as foremen those who are experienced in agricultural work, for they should not merely give orders but lend a hand at the work, so that the labourers may learn by imitation and may also appreciate that it is greater knowledge and skill which entitles the foreman to command. The foreman should never be authorized to enforce his discipline with the whip if he can accomplish his result with words.

Avoid having many slaves of the same nation, for this gives rise to domestic rows.

The foremen will work more cheerfully if rewards are offered them, and particularly pains must be taken to see that they have some property of their own, and that they marry wives among their fellow servants, who may bear them children, some thing which will make them more steady and attach them to the place.³⁴ On account of such relationships families of Epirote slaves are

esteemed the best and command the highest prices.

Marks of consideration by the master will go far in giving happiness to your hands: as, for instance, by asking the opinion of those of them who have done good work, as to how the work ought to be done, which has the effect of making them think less that they are looked down upon, and encourages them to believe that they are held in some estimation by the master.

Those slaves who are most attentive to their work should be treated more liberally either in respect of food or clothes, or in holidays, or by giving them permission to graze some cattle of their own on the place, or some thing of that kind. Such liberality tempers the effect of a harsh order or a heavy punishment, and restores the slaves' good will and kindly feeling towards their master.

XVIII. On the subject of the number of slaves one will require for operating a farm, Cato lays down the two measures of the extent of the farm and the kind of farming to be carried on. Writing about the cultivation of olives and vines he gives these formulas, viz.:

For carrying on an olive farm of two hundred and forty jugera, thirteen slaves are necessary, to-wit: an overseer, a housekeeper, five labourers, three teamsters, an ass driver, a swineherd and a shepherd: for carrying on a vineyard of one hundred jugera, fifteen slaves are necessary, to-wit: an overseer, a housekeeper, ten labourers, a teamster, an ass driver and a swineherd.

On the other hand Saserna says that one man is enough for every eight jugera,³⁵ as a man should cultivate that much land in forty-five days: for while one man can cultivate a jugerum in four days, yet he allows thirteen days extra for the entire eight jugera to provide against the chance of bad weather, the illness or idleness of the labourer and the indulgence of the master.³⁶

At this Licinius Stolo put in.

"Neither of these writers has given us an adequate rule," he said. "For if Cato intended, as he doubtless did, that we should add to or subtract from what he prescribes in proportion as our farm is of greater or less extent than that he describes, he should have excluded the overseer and the housekeeper from his enumeration. If you cultivate less than two hundred and forty jugera of olives you cannot get along with less than one overseer, while if you cultivate twice or more as much land you will not require two or three overseers. It is the number of labourers and teamsters only which must be added to or diminished in proportion to the size of the farm: and this applies only if the land is all of the same character, for if part of it is of a kind which cannot be ploughed, as for example very rocky, or on a steep hillside, there is that much less necessity for teams and teamsters. I pass over the fact that Cato's example of a farm of two hundred and forty jugera is neither a fair nor a comparable unit.³⁷ The true unit for comparison of farms is a centuria, which contains two hundred jugera, but if one deducts forty jugera, or one-sixth, from Cato's two hundred and forty jugera, I do not see how in applying this

rule one can deduct also one-sixth of his thirteen slaves; or, even if we leave out the overseer and the housekeeper, how one can deduct one-sixth of eleven slaves. Again, Cato says that one should have fifteen slaves for one hundred jugera of vineyard, but suppose one had a *centuria* half in vines and half in olives, then, according to Cato's rule, one would require two overseers and two housekeepers, which is absurd. Wherefore it is necessary to find another measure than Cato's for determining the number of slaves, and I myself think better of Saserna's rule, which is that for each jugerum it suffices to provide four days work of one hand. Yet, if this was a good rule on Saserna's farm in Gaul, it might not apply on a mountain farm in Liguria. In fine you will best determine what number of slaves and what other equipment you will require if you diligently consider three things, that is to say, what kind of farms are there in your neighbourhood, how large are they, and how many hands are engaged in cultivating them, and you should add to or subtract from that number in proportion as you take up more or less work. For nature gave us two schools of agriculture, which are experience and imitation. The most ancient farmers established many principles by experiment and their descendants for the most part have simply imitated them. We should do both these things: imitate others and on our own account make experiments, following always some principle, not chance:³⁸ thus we might work our trees deeper or not so deep as others do to see what the effect would be. It was with such intelligent curiosity that some farmers first cultivated their vines a second and a third time, and deferred grafting the figs from spring to summer."

Of draught animals

XIX. In respect of those instruments of agriculture which are called inarticulate, Saserna says that two yokes of oxen will be enough for two hundred jugera of arable land, while Cato prescribes three yokes for two hundred and forty jugera in olives: thus if Saserna is correct, one yoke of oxen is required for every hundred jugera, but if Cato is correct a yoke is needed for every eighty jugera. My opinion is that neither of these standards is appropriate for all kinds of land, but each for some kind: for some land is easy and some difficult to plough, and oxen are unable to break up some land except by great effort and often they leave the ploughshare in the furrow broken from the beam: wherefore in this respect we should observe a triple rule on every farm, when we are new to it, namely: find out the practice of the last owner; that of the neighbours, and make some experiments of our own.

"Cato adds," resumed Scrofa, "that on his olive farm there are required three asses to haul out the manure and one to turn the mill, and on his hundred jugera vineyard a yoke of oxen and a pair of asses for the manure, and an ass for the wine press."

In respect of cattle kept for all these purposes, which it is customary to feed in the barn yard, it should be added that you should keep as many and only as many as you need for carrying on the work of the farm, so that more easily you can secure diligent care of them from the servants whose chief care is of

themselves. In this connection the keeping of sheep is preferable to hogs not only by those who have pastures but also by those who have none, for you should keep them not merely because you have pasture, but for the sake of the manure.

Watch dogs should be kept in any event for the safety of the farm.

XX. The most important consideration with respect to barn yard cattle is that the draft oxen should be fit for their work: when bought unbroken they should not be less than three years old nor more than four, strong, but well matched, lest the stronger wear out the weaker: with large horns, black rather than any other color, broad foreheads, flat noses, deep chests and heavy quarters. Old steers which have worked in the plains cannot be trained to service in rough and mountain land; a rule as applicable when reversed. In breaking young steers it is best to begin by fastening a fork shaped yoke on their necks and leaving it there even when they are fed; in a few days they will become used to it and disposed to be docile. Then they should be broken to work gradually until they are accustomed to it, as may be done by yoking a young ox with an old one, so that he may learn what is expected of him by imitation. It is best to work them first on level ground without a plough, then with a light plough, so that their first lessons may be easy and in sand and mellow soil.

Oxen intended for the wagon should be broken in the same way, at first by drawing an empty cart, if possible through the streets of a village or a town, where they may become quickly inured to sudden noises and strange sights. You should not work an ox always on the same side of the team, for an occasional change from right to left relieves the strain of the work.

Where the land is light, as in Campania, they do not plough with heavy steers but with cows or asses, as they can be driven more easily to a light plough. For turning the mill and for carrying about the farm some use asses, some cows and others mules: a choice determined by the supply of provender. For an ass is cheaper to feed than a cow, though a cow is more profitable.³⁹

In the choice of the kind of draft animals he is to keep, a farmer should always take into consideration the characteristics of his soil: thus on rocky and difficult land the prime requirement is doubtless strength, but his purpose should be to keep that kind of stock which under his conditions yields the largest measure of profit and still do all the necessary work.

Of watch dogs

XXI. It is more desirable to keep a few dogs and fierce ones than a pack of curs. They should be trained to watch by night and to sleep by day chained in the kennel [so that they may be the more alert when set loose.]

It remains to speak elsewhere of unyoked cattle, like the flocks, but if there are meadows on the farm and the owner keeps no live stock, it is the business of a good farmer after he has sold his hay to graze and feed another's cattle on his land.

Of farming implements

XXII. Concerning the instruments of agriculture which are called mute, in which are included baskets, wine jars and such things, this may be said: Those utensils which can be produced on the farm or made by the servants should never be bought, among which are what ever may be made out of osiers or other wood of the country, such as hampers, fruit baskets, threshing sledges, mauls and mattocks, or what ever is made out of the fibre plants like hemp, flax, rushes, palm leaves and nettles, namely: rope, twine and mats. Those implements which cannot be manufactured on the farm should be bought more with reference to their utility than their appearance that they may not diminish your profit by useless expense, a result which may be best secured by buying where the things you need may be found at once of good quality, near at hand and cheap. The requirement of the kind and number of such implements is measured by the extent of the farm because the further your boundaries lie apart the more work there is to do.”

“In this connection,” put in Stolo, “given the size of the farm, Cato recommends with respect to implements as follows: he who cultivates 240 jugera in olives should have five sets of oil making implements, which he enumerates severally, such as the copper utensils, including kettles, pots, ewers with three spouts, etc.; the implements made out of wood and iron, including three large wagons, six ploughs with their shares, four manure carriers, etc. So of the iron tools, what they are and how many are needed, he speaks in great detail, as eight iron pitch forks, as many hoes and half as many shovels, etc.

“In like manner he lays down another formula of implements for a vineyard, viz.: if you cultivate 100 jugera you should have three sets of implements for the wine press and also covered storage vats of a capacity of eight hundred *cullei*, as well as twenty harvesting hampers for grapes and as many for corn, and other things in like proportion.

“Other writers advise a smaller quantity of such conveniences, but I believe Cato prescribed so great a capacity in order that one might not be compelled to sell his wine every year, for old wine sells better than new, and the same quality sells better at one time than another. Cato writes further in great detail of the kind and number of iron tools which are required for a vineyard, such as the falx or pruning hook, spades, hoes. So also several of these instruments are of many varieties, as for instance the falx, of which this author says that there must be provided forty of the kind suitable for use in a vineyard, five for cutting rushes, three for pruning trees and ten for cutting briers.”

So far Stolo, when Scrofa began again. “The owner should have an inventory of all the farm implements and equipment, with a copy on file both at the house and at the stading, and it should be the duty of the overseer to see that everything is checked against this inventory and is assigned its appropriate keeping place in the barn. What cannot be kept under lock and key should be kept in plain sight, and this is particularly necessary in respect

of the utensils which are used only at intervals, as at harvest time, like the grape baskets and such things, for what ever one sees daily is in the least danger from the thief.”

3 CONCERNING THE OPERATION OF A FARM

XXIII. "And now," interposed Agrasius, "as we have discussed the two first parts of the four-fold division of agriculture, namely: concerning the farm itself and the implements with which it is worked, proceed with the third part."

Of planting field crops

"As I hold," said Scrofa, "that the profit of a farm is that only which comes from sowing the land, there are two considerations which remain for discussion, what one should sow and where it is most expedient to sow it, for some lands are best suited for hay, some for corn, some for wine and some for oil. So also should be considered the forage crops like basil, mixed fodder, vetch, alfalfa, snail clover and lupines. All things should not be sown in rich land, nor should thin land be left unsown, for it is better to sow in light soil those things which do not require much nourishment, such as snail clover and the legumes, except always chick peas (for this also is a legume like the other plants which are not reaped but from which the grain is plucked) because those things which it is the custom to pluck (*legere*) are called legumes. In rich land should be sown what ever require much nourishment, such as cabbage, spring and winter, wheat and flax. Certain plants are cultivated not so much for their immediate yield as with forethought for the coming year, because cut and left lying they improve the land. So, if land is too thin it is the practice to plough in for manure, lupines not yet podded, and likewise the field bean, if it has not yet ripened so that it is fitting to harvest the beans.⁴⁰

"Not less should you make provision for cultivating what yields you profit in mere pleasure, like arbours and flower gardens: and those plantations which do not serve either for the support of man or the delight of the senses, but are not the less useful in the economy of the farm. Thus suitable places must be set aside for growing willows and reeds and other such things which affect wet places. On the other hand, you should sow field beans as much as possible in your corn land. There are other plants which seek dry places, and still others demand shade, like asparagus, both when wild and cultivated: while violets and garden flowers, which flourish in the sun should be set out in the open.

"So other things demand other planting conditions, like the osiers from which you derive your material for making basket ware, for wagon frames, winnowing baskets and grape hampers. Elsewhere you might plant and cultivate a forest for cut wood and a spinney for fowling.

"So you should reserve ground for planting hemp, flax, rush and Spanish broom (*spartum*) which serve to make shoes for the cattle, thread, cord and rope. Other situations are suitable for still other kinds of planting, as, for example, some plant garden truck and some plant other things, in a nursery, or between the rows of a young orchard before the roots of the trees have spread

far out, but this should never be done when the trees have grown lest the roots be injured."

"In this respect," said Stolo, "what Cato says about planting is in point, that a field which is rich and in good heart and without shade should be planted in corn, while a low lying field should be set in turnips, radishes, millet and panic grass."

Of planting olives

XXIV. Scrofa resumed: "The varieties of olives to plant in rich and warm land are the preserving olive *radius major*, the olive of Sallentina, the round *orchis*, the bitter *posea*, the Sergian, the Colminian, and the waxy *albicera*: which ever of these does best in your locality, plant that most extensively. An olive yard is not worth cultivating unless it looks to the west wind and is exposed to the sun; if the soil is cold and thin there you should plant the Licinian olive, for if you set out this variety in a rich and warm soil it will never make a *hostus* and the tree will exhaust itself in bearing and will become infected with red moss. (*Hostus* is the country name for the yield of oil from a single tree at each *factus* or pressing: some claim this should amount to 160 *modii*, while others reduce it to 120 *modii*, and even less in proportion to the size and number of their storage vats.)

"Cato advises you to plant elms and poplars around the farm so as to obtain from them leaves to feed the sheep and cattle as well as a supply of lumber: while this is not necessary on all farms, nor in some for the forage alone, it may be done with advantage as a wind break against the north where the trees will not shut out the sun."

Stolo added the following advice from the same author: 'If you have a piece of wet ground there plant cuttings of poplars, and also reeds which are set out as follows: having turned the sod with a hoe plant the scions of reed three feet one from the other. Wild asparagus (from which you may cultivate garden asparagus) should also be set out in such a place because the same kind of cultivation is suitable for it as for reeds. You should set out Greek willows around the reed bed to supply ties for your vines.'

Of planting vines

XXV. "In respect of planting vines," resumed Scrofa, "it should be observed that the varieties fitted for the best land and exposure to the sun are the little Aminean, the twin *Eugeneam* and the little yellow kind: while on rich or wet land the best varieties are the large Aminean, the Murgentine, the Apician and the Lucanian. Other vines, and especially the mixed varieties, do well in any kind of land."

XXVI. "In all vineyards care is taken that the prop should shelter the vine against the north wind. And if live cypresses are used as props they are planted in alternate rows and are not allowed to grow higher than is necessary for use as a prop. Cabbages are never planted near vines because they do each other damage."

"I fear," said Agrius, turning to Fundanius, "that the Sacristan may get

back before we have reached the fourth head of our subject, that of the vintage, for I am looking forward thirstily to the vintage.”

“Be of good cheer,” said Scrofa, “and prepare the grape baskets and the ewer.”

4 CONCERNING THE AGRICULTURAL SEASONS

XXVII. We have two standards of time, the first that of the revolution of the year, because in it the sun completes his circuit, the other the measure of the month, because it includes the waxing and the waning of the moon.

Of the solar measure of the year

First I will speak of the sun, whose recurring journey is divided with reference to the pursuits of agriculture into four seasons of three months each, or more accurately into eight seasons of a month and a half each. The four seasons are Spring, Summer, Autumn and Winter. In Spring certain crops are sown and the sod fields are broken up,⁴¹ so that the weeds in them may be destroyed before they have seeded themselves again, and the clods, by drying out in the sun, may become more accessible to the rain and when broken down by its action easier to cultivate. Such land should be ploughed not less than twice, but three times is better.⁴² The Summer is the season of the grain harvest; the Autumn, when the weather is dry, that of the vintage: and it is also the fit time for thinning out the woods, when the trees to be removed should be cut down close to the ground and the roots should be dug up before the first rains to prevent them from stooling. In Winter the trees may be pruned, provided this is done at a time when the bark is free from frost and rain and ice.

XXVIII. Spring begins when the sun is in Aquarius, Summer when it is in Taurus, Autumn when it is in Leo, and Winter when it is in Scorpio. Since the beginning of each of the four seasons is the twenty-third day after the entrance of the sun in these signs respectively, it follows that Spring has ninety-one days, Summer ninety-four, Autumn ninety-one and Winter eighty-nine: which, reduced to the dates of our present official calendar,⁴³ makes the beginning of Spring on the seventh day before the Ides of February (February 7), of Summer on the seventh day before the Ides of May (May 9), of Autumn on the third day before the Ides of August (August 11), and of Winter on the fourth day before the Ides of November (November 10).

A CALENDAR OF AGRICULTURAL OPERATIONS

By a more exact definition of the seasons, the year is divided into eight parts, the first of forty-five days from the date of the rising of the west wind (February 7) to the date of the vernal equinox (March 24), the second of the ensuing forty-four days to the rising of the Pleiades (May 7), the third of forty-eight days to the summer solstice (June 24), the fourth of twenty-seven days to the rising of the Dog Star (July 21), the fifth of sixty-seven days to the Autumn equinox (September 26), the sixth of thirty-two days to the setting of the Pleiades (October 28), the seventh of fifty-seven days to the winter solstice (December 24), and the eighth of forty-five days to the beginning of the first.⁴⁴

1 February 7-March 24

XXIX. These are the things to be done during the first of the seasons so enumerated: All kinds of nurseries should be set out, the vines should be first pruned, then dug, and the roots which have protruded from the ground should be cut out, the meadows should be cleaned, willows planted and the corn hoed. We call that corn land (*seges*) which has been ploughed and sowed as distinguished from plough land (*arva*) which has been ploughed but not yet sowed, while that land which was formerly sowed and lies awaiting a new ploughing is called stubble (*novalis*). When land is ploughed for the first time it is said to be broken up (*proscindere*), and at the second ploughing to be broken down (*offringere*) because at the first ploughing large clods are turned up and at the second ploughing these are reduced. The third cultivation, after the seed has been sown, is called ridging (*lirare*), that is, when by fastening mould boards on the plough, the sown seed is covered up in ridges⁴⁵ and at the same time furrows are cut by means of which the surface water may drain off. Some farmers who cultivate small farms, as in Apulia, are wont to harrow their land after it is ridged, if perchance any large clods have been left in the seed bed. The hollow channel left by the share of the plough is called the furrow, the raised land between two furrows is called the ridge (*porca*), because there the seed is as it were laid upon an altar (*porricere*) to secure a crop, for when the entrails are offered to the gods this word *porricere* is used to describe the oblation.

2 March 24-May 7

XXX. These are the things to be done during the second season between the vernal equinox and the rising of the Pleiades. Weed the corn land, break up old sod, cut the willows, close the pastures (to the stock) and complete any thing left undone in the preceding season. Plant trees before the buds shoot and they begin to blossom, for deciduous trees are not fit to transplant after they put forth leaves. Plant and prune your olives.

3 May 7-June 24

XXXI. These are the things to be done during the third season between the

rising of the Pleiades and the summer solstice. Dig the young vines or plough them, and afterwards put the land in good order; that is to say, fine the soil so that no clods shall remain. This is called fining the soil (*occare*) because it breaks down (*occidare*) the clods. Thin out the vines, but let it be done by one who knows how, for this operation which is considered of great importance is performed only on vines and not on the orchard. To thin a vine is to select and reserve the one, two and some times even three best new tendrils sprung from the stem of the vine, cutting off all the others, lest the stem may be unable to furnish nourishment for those which have been reserved. So in a nursery it is the custom to cut it back at first so that the vine may grow with a stronger stem and may have greater strength to produce fruitful tendrils: for a stem which grows slender like a rush is sterile through weakness and cannot throw out tendrils. Thus it is the custom to call a weak stem a flag, and a strong stem, which bears grapes, a palm. The name *flagellum*, indicating something as unstable as a breeze, is derived from *flatus*, by the change of a letter, just as in the case of the word *flabellum*, which means fly fan. The name *palma*, which is given to those vine shoots which are fruitful in grapes, was it seems, at first, *parilema*, derived from *parire* (to produce), whence by a change of letters, such as we find in many instances, it came to be called *palma*.

From another part of the vine springs the *capreolus*, which is a little spiral tendril, like a curled hair, by means of which the vine holds on while it creeps towards the place of which it would take possession, from which quality of taking hold of things (*capere*) it is called *capreolus*.

All forage crops should be saved at this season; first, basil, then mixed fodder (*farrago*)⁴⁶ and vetch, and last of all the hay. Our name for basil is *ocinum*, which is derived from the Greek word [Greek: ocheos] and signifies that it comes quickly, like the pot herb of the same name. It has this name also because it quickens the action of the bowels of cattle and so is fed to them as a purgative. It is cut green from a bean field before the pods are formed. On the other hand that forage which is cut with a sickle from a field in which barley and vetch and other legumes have been sown in mixture for forage, is called *farrago* from the instrument (*ferro*) with which it is cut, or perhaps because it was first sown in the stubble of a field of corn (*far*). It is fed to horses and other cattle in the spring to purge and to fatten them.

Vetch (*vicia*) is so called from its quality of conquering (*vincire*) because this plant, like the vine, has tendrils by means of which it creeps twisting upward on the stalks of lupines or other plants where it clings until it overtops its host.

If you have irrigated meadows, proceed to water them at this season, as soon as you have saved the hay.

During droughts water your grafted fruit trees every evening. They probably derive their name, (*poma*), from their appetite for drink (*potus*).

4 June 24-July 21

XXXII. During the fourth season between the summer solstice and the

rising of the Dog Star most farmers make their harvest, because it is claimed that to mature properly corn should be allowed fifteen days to germinate and shoot, fifteen days to bloom and fifteen days to ripen.

Finish your ploughing: it will be more profitable in proportion as the earth is ploughed warm, when the land is broken up, fine it, that is, work it again in order that all the clods may be reduced, for at the first ploughing large clods are always turned up. This is the time also to sow vetch, lentils, the small variety of chick peas, pulse (*ervilia*) and the other things which we call legumes, but which others, as for example the Gauls, call *legarica*, both of which names come from the practice of picking their fruit (*legere*) because they are not cut but gathered.

Work the old vines a second time and the young ones thrice, especially if there are any clods left.

5 July 21-September 26

XXXIII. During the fifth season between the rising of the Dog Star and the autumn equinox thresh your straw and rick it, continue the harrowing of your fallow land, prune your fruit trees, and mow your irrigated meadow the second time.

6 September 26-October 28

XXXIV. The authorities advise you to begin to sow at the commencement of the sixth season immediately after the autumn equinox and to keep it up for the following 91 days, but not to attempt to sow any thing after the winter solstice, unless it is absolutely necessary, because seed sown before the winter solstice germinates in seven days, while that sown later hardly ever sprouts for 40 days.

In like manner the authorities say that you should not begin your sowing before the equinox, lest continued rains cause the seed to rot in the ground. The best time to plant beans is at the setting of the Pleiades, but gather the grapes and make the vintage between the equinox and the setting of the Pleiades. Immediately afterward begin to prune the vines, to propagate them and plant fruit trees, but in those regions where the frost comes early it is better to postpone these operations until the following spring.

7 October 28-December 24.

XXXV. These are the things to do during the seventh season between the setting of the Pleiades and the winter solstice. Plant lilies and crocuses and propagate roses, which may be done by making cuttings about three inches in length from a stem already rooted, set these out and later, after they have formed their own roots, transplant them. The cultivation of violets has no place on a farm because they require elevated beds for which the soil is scraped up and these are damaged or even washed away by heavy rains, thus wasting the fertility of the land. At any time of the year between the rising of the west wind and the rising of Arcturus (February-September) it is proper to transplant from the seed beds thyme, an herb, which owes its name, *serpyllum*, to its creeping habit (*quod serpit*). This is the season also to dig

new ditches, clean the old ones, and to prune the trees in the arbustum and the vines which are married to them, but be careful that you suspend most of your work during the fifteen days before and after the winter solstice: it is fitting, however, to set out some trees during this period, as, for example, elms.

8 December 24-February 7

XXXVI. These are the things to do during the eighth season between the winter solstice and the rising of the west wind. Drain the fields, if any water is standing on them, but if they are dry and the land is friable, harrow them. Prune the vines and the orchard. When it is not fitting to work in the fields then those things should be done which can be done under cover during the winter twilight.

All these rules should be written out and posted in the farmstead and the overseer especially should have them at the tip of his tongue.

Of the influence of the moon on agriculture

XXXVII. The lunar seasons also must be considered. They are divided into two terms, that from the new moon to the full, and that from the full moon to the next moon, or until that day which we call *intermenstruus*, or the last and the first of a moon, whence at Athens this day is called [Greek: henae kai nea] (the old and the new), though the other Greeks call it [Greek: triakas] the thirtieth day. Some agricultural operations may be undertaken with more advantage during the increase of the moon, others during the decrease,⁴⁷ as, for example, the harvest or cutting of wood.”

“I observe a practice which I learned from my father,” said Agrasius, “not only never to shear my sheep, but not even to have my own hair cut on the decrease of the moon, for fear that I might become bald.”

“What are the quarters of the moon,” said Agrius, “and what bearing have they on agriculture?”

“Have you never heard in the country,” said Tremelius, “the lore about the influence of Jana (Diana) on the eighth day before her waxing, and again on the eighth day before her waning; how certain things which ought to be done during the increase can be done to better advantage in the second quarter than the first, and that what ever is fitting to do on the wane of the moon can be better done when her light is less? This is all I know about the effect of the four quarters of the moon upon agriculture.”

ANOTHER CALENDAR OF SIX AGRICULTURAL SEASONS

“There is another division of the year,” said Stolo, “which takes account of both the sun and the moon, namely: into six seasons, because almost all the cultivated fruits of the earth come to maturity and reach the vat or the granary after five successive agricultural operations and are put to use by a sixth, and these are, first, the preparing (*praeparandum*); second, the planting (*serendum*); third, the cultivating of the growing crop (*nutricandum*); fourth, the ingathering (*legendum*); fifth, the storing (*condendum*), and sixth, the consuming (*promendum*).”

1 PREPARING TIME

Of tillage

In the matter of preparation there are different things to be done for different crops, as, if you wish to make an orchard or an arbustum, you trench and grub and plough; if you plant grain, you plough and harrow; while, if you cultivate trees, you mulch their roots by breaking the earth with a mattock, more or less according to the nature of the tree, for some trees, like the cypress, have a small, and others like the plane tree have a large, root system (for example, that in the Lyceum at Athens described by Theophrastus, which, when it was still a young tree, had a spread of roots to the extent of 33 cubits). If you break the ground with a plough and cattle, it is well to work the land a second time before you sow your seed. So, if you are making a meadow the preparation is to close it to the stock, and this is usually done when the pear tree is in bloom: if it is an irrigated meadow the preparation is to turn in the water at the proper time.

Of manuring

XXXVIII. As part of this same operation should be considered what places in a field need manure and what kind of manure you can use to the greatest advantage, for the several kinds have different qualities. Cassius says that the best manure is that of birds, except swamp and sea birds,⁴⁸ but the best of all is, he claims, the manure of pigeons because it is the hottest and causes the land to ferment. This ought to be sown on the land like seed, not distributed in heaps like the dung of cattle. I myself think the best manure is that from aviaries in which thrushes and blackbirds are kept, because it is not only good for the land but serves as a fattening food for cattle and hogs: for which reason those who farm aviaries pay less rent when the owner stipulates that the manure is to be used on the farm, than those to whom it is a perquisite. Cassius advises that the manure next in value to that of doves is human feces, and third that of goats and sheep and asses. The manure of horses is of the least value on corn land, but on meadows it is the best, because, like the manure of other draught animals fed on barley, it brings a heavy stand of grass. The manure pit should be near the barn in order that it may be available with the least labour. If you plant a stake of oak wood in the manure pit it will not harbour serpents.

2 PLANTING TIME

Of the four methods of propagating plants

XXXIX. The second operation, namely that of propagating, must be considered in relation to the proper time for sowing each kind of seed, for this concerns the aspect of the field you are to sow and the season fitting for what you are to plant. Do we not see some things grow best in the spring, others in summer, some in autumn, and others again in winter? For each plant is sowed or propagated or harvested in season according to its nature: so while most trees are grafted most successfully in spring, rather than the autumn, yet figs may be grafted at the summer solstice, and cherries even in winter.

And since there are four methods of propagation of plants, by nature and by the several processes of art, namely: transplanting from one place to another, as is done in layering vines, what is called cuttage or propagating quick sets cut from trees, and graftage, which consists in transferring scions from one tree to another, let us consider at what season and in what locality you should do each of these things.

a. Seeding, and here of seed selection

XL. In the first place, the seed, which is the principle of all germination, is of two kinds, that which is not appreciable by our senses and that which is. Seed is hidden from us when it is disseminated in the air, as the physicist Anaxagoras holds, or is distributed over the land by the surface water, as Theophrastus maintains. The seeds which the farmer can see should be studied with the greatest care. There are some varieties, like that of the cypress, which are so small as to be almost invisible, for those nuts which the cypress bears, that look like little balls covered with bark, are not the seed but contain it. Nature gave the principle of germination to seed, the rest of agriculture was left for the experience of man to discover, for in the beginning before the interference of man plants were generated before they were sown, afterwards those seeds which were collected by man from the original plants did not generate until after they had been sown.

Seed should be examined to ascertain that it is not sterile by age, that it is clean, particularly that it is not adulterated with other varieties of similar appearances: for age has such effect upon seed as in some respects to change its very nature, thus it is said that rape will grow from old cabbage seed, and vice versa.⁴⁹

b. Transplanting

In respect of transplanting, care should be taken that it is done neither too soon nor too late. The fit time, according to Theophrastus, is spring and autumn and midsummer, but the same rule will not apply in all places and to all kinds of plants: for in dry and thin clay soil, which has little natural moisture, the wet spring is the time, but in a rich and fat soil it is safe to transplant in autumn. Some limit the practice of transplanting to a period of

thirty days.

c. Cuttage

In respect of cuttage, which consists in planting in the ground a live cutting from a tree, it behooves you especially to see that this is done at the proper time, which is before the tree has begun to bud or bloom: that you take off the cutting carefully rather than break it from the parent tree, because the cutting will be more firmly established in proportion as it has a broad footing which can readily put out roots: and that it is planted promptly before the sap dries out of it.

In propagating olives select a truncheon of new grown wood about a foot in length and the same size at each end: some call these *clavolae* and others call them *taleae*.

d. Graftage

In respect of graftage, which consists in transferring growing wood from one tree to another, care must be taken in selecting the tree from which the scion is taken, the tree on which it is grafted, and the time and the manner in which it is done: for the pear cannot be grafted on an oak, even though it may upon the apple. In this operation many men who have great faith in the sayings of the soothsayers give heed to their warning that as many kinds of grafts there may be on a tree so many bolts of lightning will strike it, because a bolt of lightning is generated by each graft (*ictu*).⁵⁰

If you graft a cultivated pear upon a wild pear tree no matter how good it may be, the result will not be as fortunate as if you had grafted on another cultivated pear. Having regard for the result, on what ever kind of tree you graft, if it is of exactly the same kind, as, for instance, apple on apple, you should take care that the scion comes from a better tree than that on which it is grafted.

e. A "new" method — inarching

There is another operation recently suggested,⁵¹ for propagating one tree from another, when the trees are neighbours. From the tree from which you wish to take a scion a branch is trained to that on which you wish to make the graft and the scion is bound upon an incision in a branch of the stock. The place of contact of both scion and stock is cut away with a knife so that the bark of one joins evenly with the bark of the other at the point of exposure to the weather. Care should be taken that the growing top of the scion is pointed straight upwards. The following year when the graft has knitted, the scion may be cut from its parent tree.

Of when to use these different methods

XLI. The most important consideration in propagating is, however, the time at which you do it: thus things which formerly were propagated in the spring now are propagated in summer, like the fig, whose wood is not heavy and so craves heat, as a consequence of which quality figs cannot be grown in cold climates. For the same reason water is dangerous to a new fig graft because its soft wood rots easily. For these reasons it is now considered that

midsummer is the best season to propagate figs. On the other hand it is the custom to tie a pot of water above a graft of hard wood trees so that it may drip on the graft and prevent the scion from drying up before it has been incorporated with the stock. Care must be taken that the bark of the scion is kept intact, and to that end it should be sharpened but so that the pith (*medulla*) is not exposed. To prevent the rain or the heat from injuring it from without, it should be smeared with clay and bound with bark. It is customary to take off the scion of a vine three days before it is to be grafted so that the superfluity of moisture may drain out before the scion is inserted, or, if the graft is already in place, an incision is made in the stock a little below the graft from which the adventitious moisture may drain off: but this is not done with figs and pomegranates, for in all trees of a comparatively dry nature the graft is made immediately. Indeed, some trees, like the fig, are best grafted when the scion is in bud.

Of the four kinds of propagation which I have discussed, that of graftage is preferred in respect of those trees which, like the fig, are slow in developing: for the natural seeds of the fig are those grains seen in the fruit we eat and are so small as scarcely to be capable of sprouting the slenderest shoots. For all seeds which are small and hard are slow in germinating, while those which are soft are more spontaneous, just as girls grow faster than boys. Thus by reason of their feminine tenderness the fig, the pomegranate and the vine are quicker to mature than the palm, the cypress and the olive, which are rather dry than humid by nature. Wherefore we some times propagate figs in nurseries from cuttings rather than attempt to raise them from seed: unless there is no other way to secure them, as happens when one wishes to send or receive seed across the sea. For this purpose the ripe figs which we eat are strung together and when they have dried out are packed and shipped wheresoever we wish, and thereafter being planted in a nursery they germinate. In this way the Chian, the Chalcidian, the Lydian, the African and other foreign varieties of figs were imported into Italy.

For the same reason olives are usually propagated in nurseries from truncheons such as I have described, rather than from its seed, which is hard like a nut and slow to germinate.

Of seeding alfalfa

XLII. You should take care not to plant alfalfa⁵² in soil which is either too dry or half wet,⁵³ but in good order. The authorities say that if the soil is in proper condition a *modius* (peck) and a half of alfalfa seed will suffice to sow a *jugerum* of land. This seed is sowed broad-cast on the land like grass and grain.

Of seeding clover and cabbage

XLIII. Snail clover (*cytisu*s) and cabbage is sowed in beds well prepared and is transplanted from them and set out so that the plants are a foot and a half apart, also cuttings are taken from the stronger plants and set out like those which were raised from seed.

XLIV. The quantity of seed required for one *jugerum* is, of beans, four modii, of wheat five modii, of barley six modii, and of spelt ten modii: in some places a little more or a little less; if the soil is rich, more; if it is thin, less. Wherefore you should observe how much it is the custom to sow in your locality in order that you may do what the region and the quality of the soil demands, which is the more necessary as the same amount of seed will yield in some localities ten for one, and in others fifteen for one, as in Etruria. In Italy also, in the region of Sybaris it is said that seed yields as much as one hundred for one, and as much is claimed for the soil of Syria at Gadara, and in Africa at Byzacium.⁵⁴

It is also important to consider whether you will sow in land which is cropped every year which we call *restibilis*, or in fallow land (*vervactum*), which is [ploughed in the spring and so] allowed an interval of rest.”

“In Olynthia,” said Agrius, “they are said to crop the land every year but to get a greater yield every third year.”

“A field ought to lie fallow every other year,” said Stolo, “or at least be planted with some crop which makes less demand upon the soil.”

3 CULTIVATING TIME

“Tell us,” said Agrius, “about the third operation which relates to the cultivation and the nourishment of the crops.”

Of the conditions of plant growth

“All things which germinate in the soil,” replied Licinius, “in the soil also are nourished, come to maturity, conceive, are pregnant and in due time bear fruit or ear, so each fruit after its kind yields seed similar to that from which it is sprung. Thus if you pluck a blossom or a green pear from a pear tree, or the like from any other tree, nothing will grow again in that place during the same year, because a tree cannot have two periods of fruition in the same season. They produce only as women bear children, when their time has come.”

XLV. Barley usually sprouts in seven days after it has been sowed, and wheat not much later, while the legumes almost always sprout in four or five days, except the bean, which is somewhat later. Millet and sesame and the other similar grains sprout in the same time unless some thing in the nature of the soil or the weather retards them. If the locality is cold, those plants which are propagated in the nursery and are tender by nature ought to be protected from the frosts by coverings of leaves or straw, and, if rains follow, care should be taken that water is not permitted to stand any where about them, for ice is a poison to tender roots under ground, as to sprouts above, and prevents them from developing normally. In autumn and winter the roots develop more than does the leaf of the plant because they are nourished by the warmth of the roof of earth, while the leaf above is cut down by the frosty air. We can learn this by observation of the wild vegetation which grows without the intervention of man, for the roots grow more rapidly than that which springs from them, but only so far as they are actuated by the rays of the sun. There are two causes of the growth of roots, the vitality of the root itself by which nature drives it forward, and the quality of the soil which yields a passage more easily in some conditions than in others.

Of the mechanical action of plants

XLVI. In their effect upon plants such natural forces as I have mentioned produce some curious mechanical results. Thus it is possible to determine the time of the year from the motion of the leaves of certain trees like the olive, the white poplar and the willow, for when the summer solstice has arrived their leaves turn over. Not less curious is the habit of that flower which is called the heliotrope, which in the morning looks upon the rising sun and, following its journey to its setting, never turns away its face.

Of the protection of nurseries and meadows

XLVII. Those plants, which, like olives and figs, are grown in the nursery from cuttings and are of a tender nature, should be protected by sheds built of two planks fastened at each end: moreover they should be weeded, and this should be done while the weeds are still young, for after they have become

dry they offer resistance, and more readily break off in your hand than yield to your pull. On the other hand the grass which springs in the meadows and gives you hope of forage not only should not be rooted out while it is growing, but should not even be walked upon; hence both the flock and the herd should be excluded from the meadow at this time and even man himself should keep away, for grass disappears under the foot and the track soon becomes a path.

Of the structure of a wheat plant

XLVIII. A corn plant consists of a culm bearing at its head a spike, which, when it is not mutilated, has, as in barley and wheat, three parts, namely: the grain, the glume and the beard, not to speak of the sheath which contains the spike while it is being formed. The grain is that solid interior part of the spike, the glume is its hull and the beard those long thin needles which grow out of the glume. Thus as the glume is the pontifical robe of the grain, the beard is its apex. The beard and the grain are well known to almost every one, but the glume to very few: indeed I know only one book in which it is mentioned, the translation which Ennius made of the verses of Evhemerus. The etymology of the word *gluma* seems to be from *glubere*, to strip, because the grain must be stripped from this hull: and by a like derivation the hull of the fig which we eat is called a glume. The beard we call *arista* because it is the first part of the corn to dry (*arescere*), while we call the grain *granum* from the fact that it is produced (*gerere*), for we plant corn to produce grain, not glumes or beards, just as vines are planted to produce grapes, not tendrils. The spike, which, by tradition, the country people call *specā*, seems to get its name from *spes*, hope. For men plant with hope of the harvest. A spike which has no beard is called polled (*muticus*), for, when the spike is first forming, the beard, like the horns of a young animal, is not apparent but lies hid like a sword in its scabbard under a wrapping of foliage which hence is called the sheath. When the spike is mature its taper end above the grain is called the *frit*, while that below, where the spike joins the straw culm, is called the *urruncum*.

XLIX. When Stolo drew breath, no one asked any questions, and so, believing that enough had been said on the subject of the care of the growing crops, he resumed.

4 HARVEST TIME

“I will now speak about the gathering of the crops.”

Of the hay harvest

And first of the meadows: when the grass ceases to grow and begins to dry out with the heat, then it should be cut with scythes and, as it begins to cure, turned with forks. When it is cured it should be tied in bales and hauled into the steading; then what hay was left lying should be raked together and stacked, and, finally, when this has all been done, the meadow should be gleaned, that is, gone over with the sickle to save what ever grass escaped the mowing, such as that left standing on tussocks. From this act of cutting (*sectare*) I think that the word *sicilire* (to glean with a sickle) is derived.

Of the wheat harvest

L. The word harvest (*messis*) is properly used with respect to the ingathering of those crops which are reaped, and from this action (*metere*) its name is derived, but it is mostly used in respect of corn. There are three methods of harvesting corn, one as in Umbria, where they cradle the straw close to the earth and shock up the sheaves as they are cut: when a sufficient number of shocks has been made, they go over them again and cut each sheaf between the spikes and the straw, the spikes being thrown into baskets and sent off to the threshing floor, while the straw is left in the field and stacked. A second method of harvesting is practised in Picenum, where they have a curved wooden header⁵⁵ on the edge of which is fixed an iron saw: when this instrument engages the spikes of grain it cuts them off, leaving the straw standing in the field, where it is afterwards cut. A third method of harvesting, which is used in the vicinity of Rome and in most places, is to cut the straw in the middle and take away the upper part with the left hand (whence the word to reap [*metere*] is, I think, derived from the word *medium* — connoting a cutting in the middle). The lower part of the straw which remains standing is cut later,⁵⁶ while the rest, which goes with the grain, is hauled off in baskets to the threshing floor and there in an airy place is winnowed with a shovel (*pala*) from which perhaps the chaff (*palea*) takes its name. Some derive the name of straw (*stramentum*) from the fact that it stands (*stare*), as they think the word *stamen* is also derived, while others derive it from the fact that it is spread (*strare*), because straw is used as litter for cattle.

The grain should be harvested when it is ripe: it is considered that under normal conditions and in an easy field one man should reap almost a jugerum a day and still have time to carry the grain in baskets to the threshing floor.

The threshing floor

LI. The threshing floor should be on high ground so that the wind can blow upon it from all directions. It should be constructed of a size proportioned to your crops, preferably round and with the centre slightly raised so that if it rains the water may not stand on it but drain off as quickly as possible, and

there is no shorter distance from the centre to the circumference of a circle than a radius:⁵⁷ it should be paved with well packed earth, best of all of clay, so that it may not crack in the sun and open honeycombs in which the grain can hide itself, and water collect and give vent to the burrows of mice and ants. It is the practice to anoint the threshing floor with amurca,⁵⁸ for that is an enemy of grass and a poison to ants and to moles. Some build up and even pave their threshing floor with rock to make it permanent, and some, like the people of Bagiennae, even roof it over because in that country storms are prevalent at the threshing season. In a hot country where the threshing floor is uncovered it is desirable to build a shelter near by where the hands can resort in the heat of the day.

Threshing and winnowing

LII. The heaviest and best of the sheaves should be selected on the threshing floor and the spikes laid aside for seed. The grain is threshed from the spikes on the threshing floor, an operation which some perform by means of a sledge drawn by a yoke of oxen: this sledge consisting of a wooden platform, studded underneath with flints or iron spikes, on which either the driver rides or some heavy weight is imposed in order, as it is drawn around, to separate the grain from the chaff: others use for this purpose what is called the punic cart, consisting of a series of axle trees, equipped with toothed rollers, on which some one sits and drives the cattle which draw it, as they do in hither Spain and other places. Others cause the grain to be trodden out under the hoofs of a herd of driven cattle, which are kept moving by goading them with long poles.

When the grain has been threshed it should be tossed from the ground by means of a winnowing basket or a winnowing shovel when the wind is blowing gently, and this is done in such way that the lightest part, which is called the chaff, is blown away beyond the threshing floor, while the heavy part, which is the corn, comes clean into the basket.⁵⁹

Gleaning

LIII. After the harvest is over the grain fields should be gleaned of shattered grain, and the straw left in the field should be gathered and housed, but if there is little to be gained by such work, and the expense is disproportionate, the stubble should be grazed: for in farming it is of the greatest importance that the expense of an operation shall not exceed the return from it.

Of the vintage

LIV. In vineyards the vintage should begin when the grape is ripe, but care must be taken with what kind of grapes and in what part of the vineyard you begin: for the early grapes and the mixed variety, which is called black, ripen some time before the others and should be gathered first, like the fruit grown on the side of the arbustum, or of the vineyard, which is exposed to the sun. During the gathering those grapes from which you expect to make wine should be separated from those reserved for the table: the choicer being

carried to the wine press and collected in empty jars, while those reserved to eat are collected in separate baskets, transferred to little pots and stored in jars packed with marc, though some are immersed in the pond in jars daubed with pitch and some raised to a shelf in the store room.

The stems and the skins of the grapes which have been trodden out should be put under the press so that any must left in them may be added to the supply in the vat. When this marc ceases to yield a flow, it is chopped with a knife and pressed again, and the must expressed by this final operation is hence called *circumcisitum*⁶⁰ and is kept by itself because it smacks of the knife. The marc finally remaining is thrown into jars, to which water is added, thus preparing a drink which is called after-wine or grape juice, and is given to the hands in the winter instead of wine.

Of the olive harvest

LV. And now of the harvest of the olive yard.⁶¹ You should pick by hand, rather than beat from the tree, all the olives which can be reached from the ground or from a ladder, because this fruit becomes arid when it has been struck and does not yield so much oil: and in picking by hand it is better to do so with the bare fingers rather than with a tool because the texture of a tool not only injures the berry but barks the branches and leaves them exposed to the frost. So it is better to use a reed than a pole to strike down the fruit which cannot be reached by hand, for (as the proverb is) the heavier the blow, the more need there is for a surgeon. He who beats his trees should beware of doing injury, for often an olive when it is struck away brings down with it from the branch a twig, and when this happens the fruit of the following year is lost: and this is not the least reason why it is said that the olive bears fruit, or much fruit, only every other year.

Like the grape, the olive serves a two-fold function after it is gathered. Some are set aside to be eaten and the rest are made into oil, which comforts the body of man not only within but without, for it follows us into the bath and the gymnasium. Those berries from which it is proposed to make oil are usually stored in heaps on tables for several days where they may mellow a little. Each heap in turn is carried in crates to the oil jars and to the *trapetus*, or pressing mill, which is equipped with both hard and rough stones. If the olives are left too long in the heap they heat and spoil and the oil is rancid, so if you are unable to grind promptly the heaps of olives should be ventilated by moving them. The yield of the olive is of two kinds, oil which is well known and *amurca*, of the use of which many are so ignorant that one can often see it streaming from the mill and wasting upon the ground where it not only discolours the soil, but in places where it collects even makes it sterile: while if applied intelligently it has many uses of the greatest importance to agriculture, as, for instance, by pouring it around the roots of trees, chiefly the olive itself, or wherever it is desired to destroy weeds.⁶²

5 HOUSING TIME

LVI. "Up to this moment," cried Agrius, "I have been sitting in the barn with the keys in my hands waiting for you, Stolo, to bring in the harvest."

"Lo, I am here at the threshold," replied Stolo. "Open the gates for me."

Of storing hay

In the first place, it is better to house your hay than to leave it stacked in the field, for thus it makes more palatable provender, as may be proven by putting both kinds before the cattle.

Of storing grain

LVII. But corn should be stored in an elevated granary, exposed to the winds from the east and the north, and where no damp air may reach it from places near at hand. The walls and the floors should be plastered with a stucco of marble dust or at least with a mixture of clay and chaff and amurca, for amurca will serve to keep out mice and weevil and will make the grain solid and heavy. Some men even sprinkle their grain with amurca in the proportion of a quadrantal to every thousand modii of grain: others crumble or scatter over it, for the same purpose, other vermifuges like Chalcidian or Carian chalk or wormwood, and other things of that kind. Some farmers have their granaries under ground, like caverns, which they call silos, as in Cappadocia and Thrace, while in hither Spain, in the vicinity of Carthage, and at Osca pits are used for this purpose, the bottoms of which are covered with straw: and they take care that neither moisture nor air has access to them, except when they are opened for use, a wise precaution because where the air does not move the weevil will not hatch. Corn stored in this way is preserved for fifty years, and millet, indeed, for more than a century.

On the ether hand again, in hither Spain and in certain parts of Apulia they build elevated granaries above ground, which the winds keep cool, not only by windows at the sides but also from underneath the floor.

Of storing legumes

LVIII. Beans and other legumes keep safe a long time in oil jars covered with ashes. Cato says the little Aminnean grape, as well as the large variety and that called Apician, keep very well when buried in earthen pots: or they may be preserved quite as well in boiled new wine, or in fresh after-wine. The varieties which keep best when hung up are the hard grapes and those known as the Aminnean Scantian.

Of storing pome fruits

LIX. The pome fruits, like the preserving sparrow apples, quinces and the varieties of apples known as Scantian, and 'little rounds' (*orbiculata*) and those which formerly were called winesap (*mustea*), and now are called honey apples (*melimela*), can all be kept safely in a cold and dry place when laid on straw, and so those who build fruit houses take care to have the windows give upon the north wind and that it may blow through them: but they should not

be left without shutters for fear that the fruits should lose their moisture and become shrivelled by the effect of the continuous wind.

The vaults, the walls and the pavements of these fruiteries are usually laid in stucco to keep them cool: thus rendering them such pleasant resorts that some men even spread there their dining couches: as well they may, for if the pursuit of luxury impels some of us to turn our dining rooms into picture galleries in order to regale even our eyes with works of art [while we eat], should we not find still greater gratification in contemplating the works of nature displayed in a savory array of beautiful fruits, especially if this was not procured, as has been done, by setting up in your fruiterie on the occasion of a party a supply of fruit purchased for the purpose in town?

Some think best to dispose their apples in the fruiterie on concrete tables, others on beds of straw, and some even on flocks of wool.

Pomegranates are preserved by sticking their twigs in jars of sand, quinces and sparrow apples are strung together and hung up, but the late maturing Anician pears are best preserved in boiled must. Sorbs and pears also are some times cut up and dried in the sun, though the sorb may be easily preserved intact by keeping them in a dry place: turnips are cut up and preserved in mustard, while walnuts keep well in sand, as I have explained with respect to ripe pomegranates. There is a similar way of ripening pomegranates: put the fruit, while it is still green and attached to its branch, in a pot without a bottom, bury this in the earth and scrape the soil around the protruding branch so as to keep out the air, and when the pomegranates are dug up they will be found to be not only intact but larger than if they had hung all the time on the tree.

Of storing olives

LX. With respect to preserving olives, Cato advises that table olives, both the round and the bitter berried kinds, keep best in brine both when they are dry and when they are green, but if they are bruised it is well to put them in mastich oil. Round olives will retain their black colour if they are packed in salt for five days, and then, the salt having been brushed away, are exposed for two days in the sun: or they may be preserved in must boiled down to one-third, without the use of salt.

Of storing amurca

LXI. Experienced farmers do well to save their amurca as they do their oil and their wine. The method of preserving it is this: immediately after the oil has been pressed out, draw off the amurca and boil it down to one-third and, when it has cooled, store it in vats. There are other methods also, as that in which must is mingled with the amurca.

6 CONSUMING TIME

LXII. Since no one stores his crops except to bring them out again, it remains to make a few observations upon the sixth and last operation in our round of agriculture.

Crops which have been stored are brought out either to care for them, to consume them or to sell them, and as all crops are not alike there are different times for caring for them and for consuming them.

Of cleaning grain

LXIII. Grain is taken out of store to be cleaned, when the weevil begins to damage it. When this is apparent the grain should be laid out in the sun and bowls of water placed nearby and the weevil will swarm on this water and drown themselves. Those who store their grain in the pits which are called silos should not attempt to bring out the grain for some time after the silo has been opened because there is danger of suffocation in entering a recently opened silo. The corn which, during the harvest time, you stored in the ear and which you contemplate using for food, should be brought out during the winter to be crushed and ground in the grist mill.

Of condensing amurca

LXIV. When it flows from the oil mill, amurca is a watery fluid full of dregs. It is the custom to store it in this state in earthen jars and fifteen days later to skim off the scum from the top and transfer this to other jars, an operation which is repeated at regular intervals twelve times during the following six months, taking care that the last skimming is done on the wane of the moon. Then it is boiled in a copper kettle over a slow fire until it is reduced two-thirds, when it may be drawn off for use.

Of racking wine

LXV. When the must is stored in the vat to make wine, it should not be racked off while it is fermenting nor until this process has advanced so far that the wine may be considered to be made. If you wish to drink old wine, it is not made until a year is completed; when it is a year old, then draw it out. But if your vineyard contains that kind of grape which turns sour early, you should eat the fruit, or sell it before the succeeding vintage. There are kinds of wine, like that of Falernum, which improve the longer you keep them.

Of preserved olives

LXVI. If you attempt to eat white olives immediately after you have put them up and before they are cured your palate will reject them on account of their bitterness (and the same is true of the black olive) unless you dip them in salt to make them palatable.

Of nuts, dates and figs

LXVII. The sooner you use nuts, dates and figs after they have been stored, the more palatable they will be, for by keeping figs lose their flavour, dates rot and nuts dry up.

Of stored fruits

LXVIII. Fruits which are strung, such as grapes, apples and sorbs show by their appearance when they may be taken down for use, for by their change of colour and shrinking they reveal themselves as destined to the garbage pile unless they are eaten in time. Sorbs which have been laid by when they are already dead-ripe should be used promptly, but those which were picked green are slower to decay: for green fruit in the store house must there go through the process of ripening which was denied it on the tree.

Of marketing grain

LXIX. The spelt which you wish to have prepared for food should be taken out in the winter to be ground in the mill: but your seed corn should not be taken out until the fields are ready to receive it, a rule which obtains in respect of all kinds of seed. What you have for sale should be taken out at the appropriate time also, for some things which cannot be kept long without spoiling should be taken out and sold promptly, while others which keep should be retained so that you may sell when the price is high, for often commodities which are kept on hand a long time, will, if put on the market at the proper time, not only yield interest for the time you held them but even a double profit.

As Stolo was speaking, the freedman of the Sacristan ran up to us with his eyes full of tears and, begging our pardon for having kept us waiting so long, invited us to come to the funeral on the following day. We all sprang up and cried out together “What? To the funeral? Whose funeral? What has happened?”

The freedman, weeping, told us that his master had been struck down by a blow with a knife, but who did it he had been unable to discover by reason of the crowd, all that he heard being an exclamation that a mistake had been made. He added that when he had carried his master home and had sent the servants to call a doctor, whom they brought back with them quickly, he trusted that it might seem reasonable to us that he had waited to attend upon the doctor rather than come to notify us at once, and while he had not been able to be of any service to his master, who had given up the ghost in a few minutes, yet he hoped we might approve his conduct.

Accepting these excuses as amply justified, we descended from the temple bewildered more by the hazard of human life than surprised that such a fate should be possible at Rome:⁶³ and so we went our several ways.

BOOK II

THE HUSBANDRY OF LIVE STOCK

Introduction: the decay of country life

Those great men our ancestors did well to esteem the Romans who lived in the country above those who dwelt in town. For as our peasants today condemn the tenant of a villa as an idler in comparison with the busy life of an agricultural labourer, so our ancestors regarded the sedentary occupations of the town as waste of time from their habitual rural pursuits: and in consequence they so divided their time that they might have to devote only one day of the week to their affairs in town, reserving the remaining seven for country life.⁶⁴

So long as they persisted in this practice they accomplished two things both that their farms were fertile through good cultivation and that they themselves enjoyed the best of health: they felt no need of those Greek gymnasia which now every one of us must have in his town house, nor did they deem that in order to enjoy a house in the country one must give sounding Greek names to all its apartments, such as [Greek: prokoiton] (antechamber) [Greek: palaistra] (exercising room) [Greek: apodutaerion] (dressing room) [Greek: peristulon] (arcade) [Greek: ornithon] or (poultry house) [Greek: peristereon] (dove cote) [Greek: oporothaekae] (fruitery) and the like.

Since now forsooth most of our gentry crowd into town, abandoning the sickle and the plough and prefer to exercise their hands in the theatre and the circus rather than in the corn field and the vineyard, it has resulted that we must fain buy the very corn that fills our bellies and have it hauled in for us, yea, out of Africa and Sardinia, while we bring home the vintage in ships from the islands of Cos and Chios!

And so it has happened that those lands which the shepherds who founded the city taught their children to cultivate are now, by their later descendants, converted again from corn fields back to pastures, thus in their greed of gain violating even the law, since they fail to distinguish the difference between agriculture and grazing.⁶⁵ For a shepherd is one thing and a ploughman another, nor for all that he may feed his stock on farm land is a drover the same as a teamster: herded cattle, indeed, do nothing to create what grows in the land, but destroy it with their teeth, while the yoked ox on the contrary conduces to the maturity of grain in the corn fields and forage in the fallow land. The practice and the art of the farmer is one thing, I say; that of the shepherd another; the farmer's object being that what ever may be produced by cultivating the land should yield a profit; that of the shepherd to make his profit from the increase of his flock; and yet the relation between them is intimate because it is much more desirable for a farmer to feed his forage on the land than to sell it, and a herd of cattle is the best source of supply of that which is the most available food of growing plants, namely, manure:⁶⁶ so it follows that whoever has a farm ought to practise both arts, that of agriculture

and that of grazing cattle, indeed, also that of feeding game, as is done at our country houses, since no little profit may be derived from aviaries and rabbit warrens and fish ponds. And since I have written a book concerning the first of these occupations — that of the husbandry of agriculture — for my wife Fundania because of her interest in that subject, now, my dear Turranius Niger, I write this one on the husbandry of live stock for you, who are so keen a stock fancier that you are a frequent attendant at the cattle market at Macri Campi, where, by your fortunate speculations, you have found means to make provision for many crying expenses.

I could do this on my own authority because I am myself a considerable owner of live stock with my flocks of sheep in Apulia and my stud of horses at Reate, but I will run through the subject, briefly and summarily rehearsing what I gathered from conversation with certain large stock feeders in Epirus at the time when, being in command of the fleet in Greece during the war with the pirates, I lay between Delos and Sicily.⁶⁷

Of the origin, the importance and the economy of live stock husbandry

I.⁶⁸ When Menates had gone, Cossinius said to me: “We shall not let you go until you have explained those three points which you began to discuss the other day when we were interrupted.”

“What three points,” said Murrius. “Are they those concerning feeding cattle, of which you spoke to me yesterday?”

“Yes,” replied Cossinius, “they are the considerations of what was the origin, what the importance, and what the economy of the husbandry of live stock. Varro here had begun to discourse upon them while we were calling on Petus during his illness, when the arrival of the physician interrupted us.”

“Of the three divisions of the [Greek: historikon] or interpretation of this subject, which you have mentioned, I will venture,” said I, “to speak only of the first two, of the origin and of the importance of this industry. The third division, of how it should be practised, Scrofa shall undertake for us, as one, if I may speak Greek to a company of half Greek shepherds [Greek: hos per mou pollon ameinon] (who is better qualified than I am),⁶⁹ for Scrofa was the teacher of C. Lucilius Hirrus, your son-in-law, whose flocks and herds in Bruttii have such reputation.”

“But,” interrupted Scrofa, “you shall hear what we have to say only on condition that you, who come from Epirus and are masters of the art of feeding cattle, shall recompense us and shall give public testimony of what you know on the subject: for none of us knows it all.”

Having thus assumed that my share of the discussion should be the first or theoretical part of the subject (which I did, although I have a stock farm in Italy, because, as the proverb is, not every one who owns a lyre is a musician), I began:

“Doubtless in the very order of nature both man and cattle have existed since the beginning of time, for whether we believe that there was a First Cause of the generation of animals, as Thales of Miletus and Zeno of Citium

maintained, or that there was none as was the opinion of Pythagoras of Samos and Aristotle of Stagira, it is, as Dicaearchus points out, a necessity of human life to have descended gradually from the earliest time to the present day: thus in the beginning was the primitive age when man lived on whatever the virgin soil produced spontaneously; thence he descended to the second or pastoral age, when, as he had formerly gathered for his use acorns,⁷⁰ strawberries, mulberries and apples by picking them from trees and bushes, so now, to satisfy a like need, he captured in the woods such as he could of the wild beasts of the field, and, having enclosed, began to domesticate them. Among these it is considered not without reason that sheep were foremost, both because of their utility and because of their docile nature, for this animal is the gentlest of all and most readily accommodated to the life of man, and supplies him with milk and cheese for food, and skins and wool to clothe his body.

“Finally, by the third step, man descended from the pastoral age to that of agriculture. In this there have persisted many relics of the two preceding ages, which, long remaining in their original state, are found even in our day: for in many places may yet be seen some kinds of our domestic cattle still in their wild state, such as the large flocks of wild sheep in Phrygia, and in Samothrace a species of wild goats like those which are called “big horns” (platycerotes) and abound in Italy on the mountains of Fiscellum and Tetrica. Every body knows that there are wild swine, unless you maintain that the wild boar is not a true member of the swine family.

“There are still many cattle running at large in Dardania, Medica and Thrace, while there are wild asses in Phrygia and Lycaonia, and wild horses in certain regions of hither Spain.

“I have now told you of the origin of the industry of feeding cattle. As to its importance, I have this to say:

“The most important persons of antiquity were all keepers of live stock, as both the Greek and Latin languages reveal, as well as the earliest poets, who describe their heroes some as [Greek: polyarnos] (rich in lambs), some as [Greek: polymaelos] (rich in sheep), and others as [Greek: polyboutaes] (rich in herds), and tell of flocks which on account of their value were said to have golden fleeces, like that of Atreus in Argos which he complained that Thyestes stole away from him: or that ram which Aeetes sacrificed at Colchis, whose fleece was the quest of those princes known as the Argonauts: or again like those so called golden apples (*mala*) of the Hesperides that Hercules brought back from Africa into Greece, which were, according to the ancient tradition, in fact goats and sheep which the Greeks, from the sound of their voice, called [Greek: maela] indeed, much in the same way our country people, using a different letter (since the bleat of a sheep seems to make more of the sound of *bee* than of *me*) say that sheep “be-alare,” whence by the elision of a letter as often happens, is derived the word *belare* (or *balare*), to bleat.

“If cattle had not been held in the highest esteem among the ancients the astrologers would not have called the signs of the zodiac by their names in describing the heavens: and they not only did not hesitate to place them there but many even begin their enumeration of the twelve signs with these animal names, thus giving Aries and Taurus precedence over Apollo and Hercules, whose signs, very gods as they are, are subordinated under the name of Gemini: nor did they deem that a sixth of these twelve signs was a sufficient proportion for the names of cattle, but they must even add Capricornus and make it a quarter. Furthermore, in naming the constellations they selected other names of cattle, as the goat, the kid, and the dog. And in like manner have not certain parts both of the sea and of the land taken their names from cattle, as witness the Aegean Sea, which is called after the Greek name for goat [Greek: aigeos], and Mount Taurus in Syria after the bull, and Mount Cantherius in the Sabine country after the horse, and the Thracian, as well as the Cimmerian, Bosphorus, after the ox: and again many place names on land like the town in Greece known as [Greek: hippion Argos], or horse breeding Argos. Yea, Italy itself derives its name, according to Piso, from *vitula*, our word for heifer.

“Who can deny that the Roman people themselves are sprung from a race of shepherds, for every one knows that Faustulus, the foster father of Romulus and Remus, who brought them up, was a shepherd. Is it not proof that they were shepherds that they chose the Parilia, or feast of the goddess of the shepherds, in preference to all other days, for the founding of the city; that a penalty even to this day is assessed in terms of cattle or sheep, according to the ancient custom; that our most ancient money, the *as* of cast copper, always bore the effigy of some domestic animal; that whenever a town was founded the limits of the walls and the gates were laid off with a plough drawn by a bull and a cow yoked together; that when the Roman people are purified it is done by driving around them a boar, a ram and a bull, whence the sacrifice is known as the Suovetaurilia; that we have many family names among us derived from both the great and small cattle: thus from small cattle Porcius, Ovinus, Caprilus, and from great cattle Equitius, Taurus, and some of our families have received from cattle cognomens which signify for what they are esteemed, as, for instance, the Annii family are called Capra, the Statilii family are called Taurus and the Pomponii family are called Vitulus, and so many others are derived from cattle.

“It remains now to discuss the art of animal husbandry, and on this subject our friend Scrofa, to whom this age has awarded the palm for excellence in all branches of farm management, will say what ever is to be said, as he is better qualified than am I.”

When all eyes had been turned upon him, Scrofa began:

“Doubtless the art of breeding and of feeding cattle consists in getting the maximum profit out of those things from which the very name of money is derived, for our word for money (*pecunia*) comes from *pecus*, cattle, which is

the foundation of all wealth.

“Our enquiry may be divided into nine subjects, or three parts each with three subdivisions, namely: (i) concerning small cattle, of which the three kinds are sheep, goats and swine: (2) concerning large cattle, which are likewise divided by nature into three species, neat cattle, asses and horses: and (3) concerning those instruments of animal husbandry which are not kept for profit but for convenience, namely: mules, dogs and shepherds. Each of these nine subjects must be considered under nine heads: (a) four relating to the acquisition of cattle, (b) four to the care of them, and (c) one which has to do with all the others. So there are at least eighty-one chapters for discussion of the subject, all indispensable and all of great importance.

“Under the head (a) of acquisition, it is first of all necessary, to enable you to buy good live stock, that you should know at what age it is best to buy and to keep each different kind. For instance, you may buy neat cattle for less money before they are a year old and after they are ten, because they begin to breed at two or three years and leave off soon after the tenth year, the beginning and the end of the life of all live stock being sterile. The second consideration under this head is a knowledge of the conformation of each kind of cattle and what it should be, for this is of great importance in determining the value of all animals. Thus experienced stockmen buy cattle with black horns rather than white, large goats rather than small, and swine with long bodies and short heads. The third consideration under this head is to make sure of the breeding. On this account the asses of Arcadia are celebrated in Greece, as are those of Reate in Italy, so that I remember an ass that brought sixty thousand sesterces, and a four-in-hand team at Rome that was held at four hundred thousand. The fourth consideration is of the legal precautions to be observed in buying live stock, for in order that title may pass from one to another certain formalities must intervene, since neither a contract nor even the payment of the purchase money suffices in all cases to transfer a title: thus in buying you some times stipulate that the animal is in good health, some times that it comes out of a healthy flock or herd, and some times no stipulation at all is made.

“Under the head (b) of the care of live stock, the four considerations are what should be done, after you have bought your cattle, in respect of feeding, of breeding, of raising them, and of maintaining their health. In the matter of feeding, which is the first of these considerations, the three things to be observed are where and how much, when, and on what your cattle will graze: thus it suits goats better to graze on rough and mountain land than in fat pastures, while the contrary is true of horses. Nor are the same places fit for grazing for all kinds of cattle both in summer and winter: thus flocks of sheep are driven from Apulia a long distance into Samnium to spend the summer, and are reported to the tax farmer to be registered lest they violate the regulations of the censor.⁷¹

“In the same way mules are driven in the summer from the prairie of Rosea to the high mountains of Gurgures.

“The rules for feeding each kind of live stock in the barn yard must also be studied, as, for instance, that hay is fed to the horse and the ox, while it will not do for swine which require mast, and that barley and beans should at intervals be fed to some kinds of stock, lupines to draft cattle and alfalfa and clover to milch cows. Furthermore, it is desirable to feed the ram and the bull more heavily for thirty days before admitting them to the flock and the herd, the purpose being to increase their strength, while on the other hand the feed of the cows is cut down at that time because it is deemed that they breed most successfully when they are thin.

“The next consideration is concerning breeding, which I call the period between conception and birth, for these are the beginning and the end of pregnancy. First of all then we should consider the stinting and the season at which this should be accomplished, for as the season from the rising of the west wind to the vernal equinox (February-March) is considered best for swine, so that from the setting of Arcturus to the setting of Aquila (May-July) is best for sheep. Furthermore, a rule should be made that the male animals are kept apart from the females for some time before they are bred, a period which neatherds and shepherds usually fix at two months. The next consideration is of the rules to be observed while the animal is pregnant, because the periods of gestation differ in the several domestic animals: thus the mare goes twelve months, the cow ten, the ewe and the goat five and the sow four.

“In Spain is reported a phenomenon of breeding which seems incredible, but is nevertheless true, namely: that on Mount Tagnus on that part of the coast of Lusitania near the town of Olisippo, mares are some times impregnated by the wind,⁷² some thing which often happens with respect to chickens, whence their eggs are called [Greek: hypaenemios] (conceived by the wind),⁷³ but the foals born of such mares never live more than three years.

“When lambs are born in due season, or what we call *chordi* (that is to say those lambs which are born late and have remained beyond their season in the belly of the dam, the name *chordi*, being derived from [Greek: chorion] the Greek name for the membrane which is called the after birth), care must be taken to clean them and set them gently on their feet and to prevent the dam from crushing them.

“On the third consideration with respect to raising young animals, you must consider for how long they should be permitted to suck the dam and when and where, and if the mother has an insufficient supply of milk, how you may put the young one to nurse at the udder of another: in which case they are called *subrumi*, that is to say, under the udder, for I think that *rumis* is an old word for udder.

“Lambs are weaned usually at the end of four months, kids in three, pigs in

two. Weanling pigs, from the fact that they are considered fit to be offered for sacrifice at that age, were formerly called *sacres* as Plautus calls them when he says, “What’s the price of sacred pigs?”⁷⁴ In like manner stall fed cattle, which are being fattened for the public sacrifices, are called *opimi*.

“The fourth consideration relates to the health of the cattle, a subject as important as it is complex, for a single beast which may be sick or infected and ailing often brings a great calamity on an entire herd. There are two degrees of the healing art, one which requires consultation with a surgeon, as for men: the other which the skilful shepherd can himself practise, and this consists of three parts, namely: the consideration of what are the causes, the symptoms and the treatment which should be followed in relation to each malady. The common causes of disease in cattle are excess of heat or of cold, overwork, or its opposite lack of exercise, or, if when they have been worked, you give them food and drink at once without an interval of rest. The symptoms of fever due to heat or overwork are a gaping mouth, heavy humid breath and a burning body. The cure when such is the malady is this: bathe the animal with water, rub it with a warm mixture of oil and wine, put it on a nourishing diet, blanket it as protection against chills and give it tepid water when it is thirsty.⁷⁵ If this treatment does not suffice, let the blood, chiefly from the head.

“So there are different causes and different symptoms of the maladies peculiar to each kind of cattle, and the flock master should have them all written down.

“It remains to speak of the ninth head (c), which I mentioned, and this relates to the number of cattle to be kept and so concerns both of the other heads.

“For whoever buys cattle must consider the number of herds and how many in each herd he can feed on his land, lest his pastures prove short or more than he need, as so in either case the profit be lost. Further more, one should know how many breeding ewes there are in the flock, how many rams, how many lambs of each sex, how many culls to be weeded out. Thus, if a ewe has more lambs at a birth than she can nourish, you should do what some shepherds practise — take part of them away from her, which is done to the end that those remaining may prosper.”

“Beware!” put in Atticus, “that your generalisations do not lead you astray, and that your insistence on the rule of nine does not contradict your own definition of small and large cattle: for how can all your principles be applied to mules and to shepherds, since those with respect to breeding certainly cannot be followed so far as they are concerned. As to dogs I can see their application. I admit even that men may be included in them, because they have their wives on the farm in winter, and indeed even in their summer pasture camps, a concession which is deemed beneficial because it attaches the shepherds to their flocks, and by begetting children they increase the establishment and with it the profit on your investment.”

“If Scrofa’s number cannot be measured with a carpenter’s rule,” said I, “neither can many other generalisations, as, for instance, when we say that a thousand ships sailed against Troy, or that a certain court of Rome consists of a hundred judges (*centumviri*). Leave out, if you wish, the two chapters relating to breeding in so far as mules are concerned.”

“But why should we,” exclaimed Vaccius, “for it is related that on several occasions at Rome a mule has had a foal.”

To back up what Vaccius had said, I cited Mago and Dionysius as writing that when mules and mares conceive they bear in the twelfth month. “If,” I added, “it is considered a prodigy in Italy when a mule has a foal, it is not necessarily so in all countries. For is it not true that swallows and swans breed in Italy, which do not lay in other lands, and don’t you know that the Syrian date palm, which bears fruit in Judea, does not yield in Italy?”

“If you prefer,” said Scrofa, “to make out the entire eighty-one chapters without any on the care of mules during the breeding season, there are subjects with which you can fill this double vacancy by adding those two kinds of extraordinary profit which is derived from live stock. One of these is the fleece which men shear or pull from sheep and goats, the other, which is more widely practised, that from milk and cheese: the Greek writers indeed actually treat this separately under the title [Greek: *turopoia*], and have written extensively about it.”

Of sheep

II. “And now, since I have completed my task and the economy of live stock husbandry has been defined, do you, men of Epirus, requite us by expounding the subject in detail, so that we may see of what the shepherds of Pergamis and Maledos are capable.”

At this challenge, Atticus (who then was known as T. Pomponius but now as Q. Caecilius retaining the same cognomen)⁷⁶ began as follows:

“I gather that I must make the beginning since you seem to turn your eyes upon me: so I will speak of those cattle which you, Varro, have called primitive, for you say that sheep were the first of the wild beasts of the field which were captured and domesticated by man.

“In the first place you should buy good sheep, and they are so judged primarily in respect of their age, that they are not what is known as aged nor yet undeveloped lambs, because neither can yield you any profit, the one no longer, the other not yet: but you may deem that age which holds out a promise preferable to that whose only future is death. So far as concerns conformation, a sheep should have a round barrel, wool thick and soft and with long fibre, and, while heavy all over the body, it should be thickest on the back and neck, and yet the belly also should be covered, for unless the belly was covered our ancestors were wont to call a sheep *apica* and throw it out. They should have short legs,⁷⁷ and, if they are of the Italian breed, long tails, or short tails if they come from Syria. The most important point to guard is that your flock is headed by a good sire. The quality of a ram can usually be

determined from his conformation and from his get. So far as concerns conformation, a ram should have a face well covered with wool, horns twisted and converging on the muzzle, tawny eyes, woolly ears, a deep chest, wide shoulders and loin, a long and large tail. You should see also whether he has a black or a spotted tongue,⁷⁸ for such rams usually get black or spotted lambs. You may judge them by their get, if their lambs are of good quality. In buying sheep we practise the formalities which the law requires, following them more or less strictly in particular cases. Some men in fixing a price per head stipulate that two late lambs or two toothless ewes shall be counted as one. In other respects the traditional formula is employed thus: the buyer says to the seller, "Do you sell me these sheep for so much?" And the seller answers, "They are your sheep," and states the price. Whereupon the buyer stipulates according to the ancient formula: "Do you guarantee that these sheep, for which we have bargained, are in such good health as sheep should be; that there is none among them one-eyed, deaf or bare-bellied; that they do not come out of an infected flock and that I will take them by good right and title?"

"Even when this is done the title to the flock does not pass until they have been counted, but, nevertheless, the purchaser can hold the seller to the bargain if he does not make delivery, even though the purchase money has not passed, and by a like right the seller can hold the buyer if he does not pay up.

"I will next speak about those other four subjects which Scrofa outlined, namely: the feeding, breeding, raising and physicking of sheep. In the first place, one should see that provision is made for feeding the flock throughout the entire year, as well indoors as out. The stable should be in a suitable location, protected against the wind, looking rather to the East than the South, on cleared and sloping ground so that it can be easily swept out and kept clean, for moisture not only rots the wool of the sheep but their hoofs as well and causes scab. When sheep have stood for several days you should strew the stable with new bedding, so that they may be more comfortable and be kept cleaner, and thus eat with more appetite. You should also contrive stalls separated from the others in which you may segregate the ewes about to yearn, as well as any which may be ailing. This precaution is practicable, however, only with sheep fed at the steading, but those who graze their sheep in the mountain pastures and far from cover, carry with them wicker hurdles or nets, and other such conveniences with which they contrive folds for such separation. Sheep indeed are grazed far and wide so that often it happens that their winter quarters are many miles from their summer pastures."

"I know that to be true," said I, "for my flocks winter in Apulia and spend the summer in the mountains above Reate: thus the public cattle drifts between these two localities balance the separated pastures, as a yoke balances two baskets."⁷⁹

Atticus resumed: "When sheep are fed continually in the same locality distinction must be made in the times of feeding them according to the

seasons: thus in summer they are driven out⁸⁰ to pasture at day break because then the dewy grass is more appetizing than at midday, when it is dry. At sunrise they are driven to water, to make them more lickerish on their return. About noon and during the heat of the day they are permitted to lie in the shade of rocks or under broad spreading trees until the fresher evening air invites them to feed again until sunset.⁸¹ A sheep should always graze with the sun behind it, because its head is very sensitive to heat. At sunset the flock should be given a short rest and then driven again to water, and so brought back to feed again until it is dark, for at that time of day the grass has renewed its pleasant savour. This routine is usually followed from the rising of the Pleiades until the autumn equinox.

“After the harvest it is of two-fold advantage to turn the flock in on the stubble, as they will fatten on the shattered grain and improve the land for next year’s planting by spreading their manure in the trampled straw.

“The rules for pasturing sheep in winter and spring differ from the summer rules in this, that at those seasons the flock is not driven to pasture until the hoar frost has evaporated and they feed all day long, one watering about noon being enough.

“This is about all there to say on the subject of feeding sheep, so I pass to the consideration of breeding. The rams which you are about to use for breeding should be separated from the flock for two months before the season, and fed heavily by giving them a ration of barley when they come into the stable from the pasture: it will make them stronger for their duty.

“The best breeding season is from the setting of Arcturus to the setting of Aquila, (May-July) because lambs begotten later are apt to be born runts, and weak. As a ewe is pregnant for one hundred and fifty days, this arrangement causes her to drop her lambs at the end of autumn when the temperature is mild and the grass is renewed by the first rains. During the breeding season the flock should drink only the same kind of water, since a change not only makes spotted wool but injures the offspring. When all the ewes have been stinted, the rams should be separated from them again, because it injures ewes to be teased while they are pregnant. Ewe lambs should never be bred before they are two years old, as they cannot earlier produce strong lambs, but will themselves degenerate: indeed, it is better to keep them until the third year. To this end some shepherds protect their ewe lambs from the ram by tying baskets made of rushes or something of that kind over their rumps, but it is better to feed them apart from the flock.

“I come now to the consideration of how lambs should be raised.

“When the ewes begin to yean they are driven into a stable which has stalls set apart for the purpose, where the new born lambs can be placed near a fire to strengthen them, and there the ewes are kept two or three days until the lambs know their dams and are able to feed themselves. Thereafter the lambs are still kept up but the ewes are driven out to pasture with the flock, being brought back to them in the evening to be suckled and then once more

separated, lest the lambs be trampled by the ewes at night. In the morning before the ewes go out to pasture they are given access to their young again until the lambs are satisfied with milk. After about ten days have elapsed the lambs are picketed out of doors, being tethered with fibre or such other light material, to stakes planted some distance apart so that the little fellows may not injure themselves as they frisk together all day.

“If a lamb will not suck, it should be held up to the teat and its lips greased with butter or suet, and so made to smell at the milk. A few days later some soft vetch or tender grass may be given them before they go out to pasture and after they come in. And so they are nursed until they are four months old.

“There are some shepherds who do not milk the ewes during the nursing period, but those who do not milk them at all do better, as thus they bear more wool and more lambs.

“When the lambs are weaned great attention is necessary to prevent them from wasting away in their longing for the dam: they should be tempted to eat by giving them appetizing food, and care should be taken that they do not suffer from cold or heat. When at last they have forgotten the taste of milk and no longer yearn for the dam, they may be driven out with the flock.

“A ram lamb should not be altered until he is five months old, nor yet in very hot or very cold weather. Those which you wish to keep for rams should be chosen as far as possible from dams who are in the habit of having twin lambs.

“Most of these recommendations apply equally to those fine wool sheep which are called *pellitae*, because they are jacketed with skins, as is done at Tarentum and in Attica, to protect their wool from fouling, for by this precaution the fleece is kept in better plight for dyeing, washing or cleaning. Greater diligence is required to keep clean the folds and stables of such sheep than is necessary for the ordinary breeds: so they are paved with stone to the end that no urine may stand anywhere in the stable.

“Sheep eat whatever is put before them — fig leaves, marc, even straw. Bran should be fed to them in moderation, lest they eat either too much or too little of it, in either of which cases it is bad for the digestion, but clover and alfalfa agree with them best and make both fat and milk with the utmost facility.

“So far as concerns the health of the flock, there are many things I might add, but, as Scrofa has said, the flock master keeps his prescriptions written down in a book and carries with him what he needs in the way of physic.

“It remains to speak of the number of sheep in a flock. Some make this more, some less, for there is no natural limit. In Epirus almost all of us have a rule not to allow more than one hundred short wool sheep or fifty fine wool jacketed sheep to a shepherd.”

Of goats

III. As Atticus stopped, Cossinius took him up. “Come, my dear Faustulus,” he cried, “you have bleated long enough. Take now from me, as

from a late born Homeric Melanthius,⁸² a small offering from my flock of goats, and at the same time learn a lesson in brevity. He who wishes to form a flock of goats should consider in choosing them: first of all that they are of an age capable of breeding, and that for some time to come, for a tiro is more useful for that purpose than a veteran. As to conformation, see to it that they are strong and large, with a smooth body and thick coat: but beware of the short haired goat, for there are both kinds. The she goat should have two excrescences, like little teats, hanging under the muzzle: those which have them are fecund:⁸³ the larger the udder the more milk and butter fat she will yield. The qualities of a buck are that his coat should be largely white: his crest and neck short and his gullet long. You will have a better flock if you buy at one time goats which have been accustomed to run together, rather than by putting together a lot of goats picked up here and there.

“Concerning breeding, I refer to what Atticus has said about sheep, with this difference: that while you select a breed of sheep which are slow of foot, because they are of quieter disposition, all goats are as excitable as they are agile. Of, this last characteristic Cato records in his book *Origines*: ‘In the mountains of Socrate and Fiscellus there are wild goats which leap from rock to rock a distance of more than sixty feet.’ For as the sheep which we feed are sprung from wild sheep, so the goats which we herd are sprung from wild goats: and it is from them that the island of Caprasia, near the coast of Italy, gets its name.

“As it is recognized that the best breed of goats is one which bears two kids at a birth, breeding bucks are chosen from such a race whenever possible. Some fanciers even take the trouble to import bucks from the island of Melia, where are bred what are considered the largest and most beautiful specimens of the race.

“I hold that the formula for buying sheep cannot altogether apply to goats because no sane man ever guaranteed that goats are without malady, for the fact is that they are forever in a fever. For this reason the usual stipulation has had a few words cut out of it for use in respect of goats, and, as Manilius gives it in his treatise on the law of Sales, runs as follows: ‘Do you guarantee that these goats are well today; that they are able to drink, and that I will get good title to them?’

“There is a wonderful fact concerning goats which has been stated by certain ingenious shepherds and is even recorded in the book of Archelaus, namely, that they do not breathe through their nostrils, like other animals, but through their ears.⁸⁴

“Upon Scrofa’s four considerations which relate to the care of goats I have this to say. The flock is better stabled in the winter if its quarters look toward the Southeast, because goats are very sensitive to cold. So also, as for most cattle, the goat stable should be paved with stone or brick that the flock may be less exposed to damp and mud. When the flock passes the night out of doors, a place should be selected having the same exposure and the fold

strewn with leaves to protect the flock from fouling themselves.

“There is not much difference in the method of handling goats in the pasture from sheep, but goats have this characteristic, that they prefer the mountain woodland pastures to meadows, for they feed eagerly on the brushwood and in cultivated places crop the shrubbery; indeed, their name *caprae* is derived from *carpere*, to crop. For this reason it is customary to stipulate in farm leases that the tenant shall not graze any goat on the leased land, for their teeth are the enemies of all planted crops: wherefore the astrologers were careful to station them in the heavens outside of the pale of the twelve signs of the zodiac, but there are two kids and a goat not far from Taurus.

“So far as concerns breeding, it is the custom to separate the bucks from the pastured flock at the end of autumn and confine them apart, as has been said with respect to rams. The nannies which conceive at this time drop their kids in four months, and so in the spring. In what regards rearing the kids, it is enough to say that when they are three months old they are raised and may join the flock. What shall I say of the health of these animals who never have any? yet the flock master should have written down what remedies are used for certain of their maladies and especially for the wounds which often befall them by reason of their constant fighting among themselves and their feeding in thorny places. It remains to speak of number: this is less to the herd in the case of goats than with sheep because of the wantonness and wandering habit of the goat: sheep, on the other hand, are wont to flock together and keep in one place.

“For another reason it is the custom in Gaul to divide the goats into many flocks rather than concentrate them in large ones, because a pestilence quickly takes possession of a large herd and sweeps it to destruction. About fifty goats is considered to be a large enough flock.

“The experience of Gaberius, a Roman of the equestrian order, will illustrate the reason for this: for he, who had a thousand jugera of land near Rome, met one day a certain goatherd leading ten goats to town, and heard him say that he made a denier⁸⁵ a day out of each goat, whereupon Gaberius bought a thousand goats, hoping that he might thereby derive from his property an income of a thousand deniers a day: but so it fell out that he lost all his goats after a brief illness. On the other hand, among the Sallentini and near Casinum they graze their goats in flocks of one hundred.

“Almost the same difference of opinion exists as to the relative number of bucks to nannies, for some, and I am among them, allow a buck to every ten nannies, but others, like Menas, make it fifteen, and some even twenty, like Murrius.”

Of swine

IV. “And now,” concluded Cossinius, “which of you Italian swine breeders will stand forth and tell us of his herd? Surely he should be able to speak with the most authority whose cognomen is Scrofa.”

At this pleasantry, Tremelius turned upon Cossinius and said: "You seem to be ignorant why I am called Scrofa, but, in order that our friends sitting beside you may understand, you should know my family did not always bear this swinish cognomen, nor am I of the race of Eumaeus. The first of us to be called Scrofa was my grandfather who, when he was quaestor under the praetor Licinius Nerva, and was left in command of the army in the province of Macedonia during the absence of the praetor, it so happened that the enemy thought they had an opportunity to gain a victory and began to attack the camp. My grandfather, in exhorting the soldiers to take up their arms and go out against the enemy, exclaimed that he would soon scatter them as a sow (scrofa) does her pigs, and he was as good as his word. For in that battle he so overwhelmed and discomfited the enemy, that on account of it the praetor Nerva was hailed Imperator and my grandfather obtained his cognomen and so was called Scrofa.⁸⁶ So, while neither my great grandfather nor any of my ancestors of the Tremelian family was ever called Scrofa, yet as I am not less than the sixth of our family in succession who has attained praetorian rank, it ill becomes me to run away in the face of your challenge, so I will tell you what I know about swine. Indeed from my youth I have been devoted to agriculture, so that I am perhaps as well acquainted with that animal as is any of you great stockmen: for who of us cultivates a farm but keeps hogs, and who has not heard his father say that that man is either lazy or a spendthrift who hangs in the meat house a flitch of bacon obtained from the butcher rather than from his own farm.

"He who wishes to have a proper herd of swine ought to choose them, in the first place, of the right age, and in the second place, of good conformation: which means large everywhere except in the head and feet and of a solid colour rather than spotted: but the boar should have without fail a thick neck in addition to these other qualities. Swine of good breed may be known from their appearance, if both boar and sow are of good conformation; from their get, if they have many pigs at a birth; and from their origin, if you buy them in a place with a reputation for producing fat rather than lean hogs. The usual formula for buying runs thus: 'Do you warrant that these hogs are in good health; that I shall take good title to them; that they have committed no tort, and that they do not come out of a diseased herd?'

"Some add a particular stipulation that they are not affected with cholera.

"In the matter of pasture, a marshy place is well fitted for hogs, because they delight not only in water, but in mud, the reason for which appears in the tradition that when a wolf has fallen upon a hog he always drags the carcass into the water because his teeth cannot endure the natural heat of hog flesh.

"Swine are fed mostly on mast, though also on beans, barley and other kinds of corn, which not only make them fat but give the meat an agreeable relish. In summer they go out to pasture early in the morning and before the heat of the day: at midday they are brought into some shady place, preferably where there is water: in the afternoon, when the heat has abated, they are fed

again. In the winter time they do not go out to pasture until the hoar frost has evaporated and the ice has melted.

“In the matter of breeding, the boar should be separated from the herd for two months before the season, which should be arranged between the rising of the west wind and the vernal equinox, for thus it will befall that the sows (which are big for four months) will have their litters in summer when forage is plenty. Sows should not be bred under a year old, but it is better to wait until the twentieth month so that they may have pigs at two years. They are said to breed regularly for seven years after the first litter. During the breeding season they should be given access to muddy ditches and sloughs, so that they may wallow in the mud, which is the same relaxation to them that a bath is to a man. When all the sows are stunted, the boars should be segregated again. A boar is fit for service at eight months and so continues until his prime, after which his vigor decreases until he is fit only for the butcher to make of his flesh a dainty offering for the people. Our name for the hog, *sus*, is called [Greek: hus] in Greek, but formerly it was [Greek: thus], derived from [Greek: thuein], meaning to offer as a sacrifice, for it seems that victims were chosen from the race of swine for the earliest sacrifices; evidence of which remains in the tradition that pigs are sacrificed at the initiation to the mysteries of Ceres, that when a treaty is ratified peace begins with the slaughter of a pig, and that in solemnizing a marriage the ancient kings and mighty men of Etruria caused the bride and the bridegroom to sacrifice a pig at the beginning of the ceremony, a practice which the earliest Latins and the Greek colonists in Italy seem also to have followed: *nam et nostrae mulieres, maxime nutrices, naturam qua feminae sunt in virginibus appellant porcum, et graecae* [Greek: choiron], *significantes esse dignum insigni nuptiarum.*⁸⁷

“The hog is said to be created by nature for the food of man⁸⁸ and so life and salt perform the same functions for him, as they both preserve his flesh.

“The Gauls⁸⁹ are reputed to put up not only the largest quantity but the best quality of pork: evidence of its quality being that even now hams, sausage,⁹⁰ bacon and shoulders are imported every year from Gaul to Rome: while Cato writes concerning the amount of pork cured by the Gauls: ‘In (northern) Italy the Insubres are wont to put up three or four thousand cuts of pork [the bulk of which can be appreciated from the fact that among that people]⁹¹ the hog some times grows so fat that it is not able to stand on its feet or to walk, so that it is necessary to put it on a cart to move it any where.’ Atilius the Spaniard, who is a truthful man and learned in many things, tells of a hog which was killed in further Spain or Lusitania from which two chops, sent to the Senator L. Volumnius, were found to weigh three and twenty pounds, the fat on them being so thick that it measured a foot and three fingers from the skin to the bone.”

“I can testify to some thing not less extraordinary than what you have related,” said I, “for in Arcadia I saw with my own eyes a hog which was so fat that not only was it unable to get up but a shrew mouse having eaten a hole

in its back had there made its nest and was rearing a family. I have heard that this same thing happened in the country of the Veneti.”

“Usually,” resumed Scrofa, “the fecundity of a sow may be learned from her first litter, for in later litters she does not vary much from the number of pigs in the first.

“In the matter of rearing young swine, which we call *porculatio* it is customary to leave pigs with the sow for two months, and then when they are able to feed themselves to separate them. Pigs born in the winter are apt to be runts on account of the cold and because the sow refuses to suckle them, partly by reason of her lack of milk at that season and partly to protect her teats from the teeth of the hungry pigs.

“Each sow should suckle her pigs in her own sty, because a sow will not drive strange pigs away from her, and it results that if the litters are mingled the breed deteriorates. The year is naturally divided for the sow into two parts, because they breed twice a year, being heavy in pig for four months and suckling for two. The sty should be built about three feet deep and a little more in width and such a height from the ground as will permit a pregnant sow to get out without straining herself, as that might cause her to abort. A good measure of the proper height from the ground is what is necessary to enable the swineherd to keep watch that no little pigs are crushed by the sow, and to clean out the bedding easily. There should be a door to the sty with the lower sill elevated a foot and a palm high so as to prevent the pigs from following the sow when she goes out. As often as the swineherd cleans out the sty he should strew the floor with sand, or some thing else to absorb moisture.

“When a sow has had her pigs she should be fed liberally to enable her to make milk: for this the ration is usually two pounds of boiled barley, indeed some feed this both at morning and at night if other feed is lacking. When pigs are taken from their dam they are sometimes called *delici* or weanlings being then no longer *lactantes* or sucklings.

“Pigs are considered to be clean ten days after birth, and for that reason were then called by the ancients sacred, as being then first fit for sacrifice: and so in the *Menaechmi* of Plautus, when a character thinking some one in Epidamnus to be out of his wits and seeking to purify him, asks: ‘How much are sacred pigs here.’

“If the farm affords them, pigs should be fed grape husks and stalks.

“After they have lost the name of *lactantes* the shoats are called *nefrendes* because they are not yet able to break down (*frendere* that is *frangere*) the bean stalks. *Porcus* is the ancient Greek name for them but is fallen into disuse, for the Greeks now call them [Greek: *choiros*].

“While she is giving suck the sow should be watered twice a day to promote the flow of milk. A sow should bear as many pigs as she has teats: if she has less it is considered that she is unprofitable, but if more, a prodigy. In this respect there is the ancient tradition that the sow of Aeneas bore thirty

white (*albos*) pigs at Lavinium,⁹² which portended that after thirty years the inhabitants of Lavinium would found the town of Alba: indeed, vestiges of this sow and of her pigs may still be seen at Lavinium where there is a brazen image of them now in the public square, and the true body of the sow is shown by the priests, preserved in pickle.

“Sows are able at first to suckle eight little pigs, but as they grow larger half of them are usually taken away by experienced swineherds, because the sow cannot supply milk enough for all, and too many pigs fed together do not prosper in any event. A sow should not be driven out of the sty for ten days after having her litter except for water, but after that time she is permitted to graze in a paddock so conveniently near at hand that she may return to the sty frequently to suckle the pigs. When the pigs are large enough they are permitted to follow the sow to pasture, but at home they should be penned apart from the sow and fed by themselves until they overcome their yearning for the dam, which usually happens in ten days. The swineherd should train his shoats to do every thing at the sound of the trumpet. This training is begun by letting the shoats hear the trumpet outside their pens and then at once come out to a place where barley has been scattered broad cast (for thus less is wasted than if the feed is put in heaps and more of the shoats can get to it easily). By such education it is possible to collect pasturing hogs at the sound of a trumpet and prevent their being lost when scattered in the woods.⁹³

“Boars are altered most successfully when they are a year old, but in no case should this be done when they are less than six months old. After the operation they are no longer called boars, but barrows.

“Concerning the health of swine, I will say one thing only by way of example: if the sow is not able to supply milk the sucking pigs should be fed, until they are three months old, on roasted wheat (for when it is raw it loosens the bowels) or on barley boiled in water.

“As to number: it is considered that ten boars to an hundred sows is enough; some even reduce this proportion.

“The practice varies as to the number to a herd, but my judgment is that a hundred is a moderate number: some make it more, say 150: some feed two herds together, and some do even more than that. A small herd is less expensive than a large one because the swineherd requires less assistance. A swinefeeder should fix the number to be fed as a herd on a principle of utility, not by the number of boars he may happen to have, for that is determined by nature.”

So far Scrofa.

Of neat cattle

V. At this point we were joined by the Senator Q. Lucienus, a man as learned as he is agreeable and intimate with us all. “Hail, my fellow citizens of Epirus,” he exclaimed in Greek,⁹⁴ “and you, my dear Varro, ‘shepherd of men,’ for I have already greeted Scrofa this morning.”

While one saluted him, another reproached him for having come so late to

our club.

“I will see to that, my merry men, for I am about to offer you my back and a scourge: or else, Murrius, you who are my friend: come with me while I pay a forfeit to the goddess Pales, so that you may bear me witness if our friends here seek to make me do it again.”

“Tell him,” said Atticus, turning to Murrius, “what we have been talking about and what is still on the programme, so that when his turn comes he may be prepared. In the meantime we will take up the second order of domestic live stock and proceed to a discussion of the larger cattle.”

“In this,” said Vaccius, “my name would seem to assign me a part, since cows (*vaccae*) are included in that category. Wherefore I will tell what I know about neat cattle, so that he who knows less may learn, while he who knows more may correct me when I fall down.”

“Be careful what you do, Vaccius,” said I, “for the genus *Bos* is of the first importance among cattle, certainly in Italy, which is thought to have taken its very name from that family, for, as Timaeus records, in ancient Greece a bull was called [Greek: italos], whence is derived our word *vitula*, and from this Italy is supposed to have taken its name because of the number and beauty of its breed, of cattle (*vituli*). Others claim that the name comes from that of the famous bull Italus which Hercules drove out of Sicily into this country.

“The ox is indeed the companion and fellow labourer of man and the minister of Ceres: wherefore the ancients, holding him inviolable, made it a capital offence to kill an ox.⁹⁵ Both Attica and Peloponnesus bear witness of the regard in which the ox was held: for he who first yoked oxen to the plough is celebrated at Athens under the name Buzyges and at Argos under that of Homogyros.”

“I know,” replied Vaccius, “the importance of the ox and that his very name is used to signify that quality, as in words like [Greek: bousukon](big fig), [Greek: boupais](a big boy), [Greek: boulimos] (a ravenous hunger), [Greek: boopis] (large eyed), and again that a certain large grape is called *bumamma* (cow teat). Furthermore, I know it was the form of a bull that Jupiter assumed when he wooed Europa and bore her across the sea from Phoenicia: that it was a bull which protected the children of Neptune and Melanippe from being crushed in a stable by a herd of cattle: I know too that the bees which give the sweetest honey are generated from the carcase of an ox, whence the Greeks call them [Greek: bougeneis] (born of an ox), an expression which Plautius latinized on the occasion where the praetor Hirrius, was accused at Rome of having libeled the Senate. ‘But be of good cheer, I will give you at least as great satisfaction as did he who wrote the Bugonia.’⁹⁶

“In the first place there are said to be four ages of cattle, during which they are known by the successive designation of calf (*vitulus*), yearling (*juvencus*), prime (*novellus*) and aged (*vetulus*). These designations are further divided according to sex, as bull-calf and heifer-calf, or bull and cow.

“A cow which is sterile is called *taura*: when pregnant, *horda*, from which

last name a certain festival is called the *hordicalia* (*Fordicidia*) because cows in calf are sacrificed upon it.

“He who wishes to buy a herd of neat cattle should take care first that they are of an age to produce, rather than past breeding; that they are well set up, clean limbed, square bodied, large, with black horns and broad brows, large black eyes, hairy ears, flat cheek bones, snub-nosed, not hump-backed but rather with the back bone slightly roached, wide nostrils, blackish lips, a neck muscular and long with dew laps hanging from it, the barrel large and well ribbed, the shoulders broad and the quarters good, a tail sweeping the heels, the end being frizzled in a heavy brush, the legs rather short and straight with knees projecting a little and well separated, the feet narrow and not inclined to spread in walking, the hoofs not being splayed but consisting of light and even bones, and a hide which is not rough and hard to the touch. The best colour is black, next red, third chestnut and last white: for a white coat indicates weakness, as black indicates endurance: of the other two colours red is more common than chestnut, and both than black and white. In addition you should be particular that the bull is of good breed, which is determined from his conformation and his get, as calves usually reproduce the qualities of their sire. And, finally, it is of importance whence they come. Gallic cattle are considered in Italy to be the best for work, while on the other hand Ligurian cattle are worthless. The foreign cattle of Epirus are not only better than all the Greek cattle but even than the Italian: nevertheless, there are those who choose Italian cattle for victims and to serve as offerings to the gods on account of their size: and without doubt they may be preferred for such holy offices, so great is the distinction of their majestic bulk and their candid coats: and they are the more suitable for such use because white cattle are not so common in Italy as in Thrace at the gulf of Melas, where there are few of any other colour.

“When cattle are bought already broken for work we stipulate thus: ‘Do you guarantee these cattle to be in good health and warrant me against liability for any tort committed by them?’

“When we buy them unbroken, we say: ‘Do you guarantee these yearlings to be in good health and to come out of a healthy herd, and warrant me against liability for tort?’

“When butchers buy for the shambles they use a fuller formula recommended by Manilius: but those who buy for the altar do not usually stipulate for health in their victims.

“Neat cattle pasture best in groves where there is brushwood and much leafage: and so when they are wintered by the sea they are driven up to pasture in summer in the hills where shrubbery abounds.

“These are my breeding rules:

“For a month before breeding I cut down the food and drink of the cows because it is deemed that they breed more certainly when they are thin. On the other hand, I fatten the bulls up on grass and straw and hay for two months

before the breeding season, and during that time I keep them apart from the cows. Like Atticus, I have two for seventy cows, one a yearling, the other two years old. When that constellation has risen which the Greeks call Lyra, and we Romans, Fides, I turn the bull into the herd again. The bull indicates whether a male or a female calf has been conceived by the side on which he leaves the cow: if male, on the right; if female, on the left. "Why this is so," said Vaccius, turning to me, "I leave to you who read Aristotle."

"A cow should not be served under two years, so that she may have her first calf in the third year: it would be better in the fourth. Most cows bear for ten years, some even more. The most suitable time for stinting cows is during the forty days following the rising of the Dolphin, or even a little later, for thus they will drop their calves at the most temperate season of the year, for a cow goes ten months pregnant. On this subject I have come upon an extraordinary statement in a book that a bull which has just been altered can get a cow with calf.

"Breeding cows should be pastured where there is abundant grass and plenty of water, and care should be taken to protect them from crowding too close together, and from being struck, or from fighting with one another: moreover, to protect them against being worried in summer by cattle flies and those minute insects which get under their tails, some farmers shut them up during the heat of the day in pens, which should be strewn with leaves or some other bedding on which they can rest comfortably. In summer they are driven to water twice a day, in winter once. Against the time when they are due to drop their calves you should arrange to give them access to fresh forage near the stable which they can eat with appetite as they go out, for at that time they are very dainty about their food. A watch out must be kept to prevent their frequenting chilly places, for cold depresses the vitality as much as hunger.

"These are the rules for raising neat cattle: the suckling calves should not be suffered to sleep with their dams, for they might crush them, but should be given access to them in the morning and when they return from pasture. When the calves are weaned the dams should be comforted by having green stuff thrown into their stalls for them to eat. The floor of a calf stable, like most others, should be paved with stone to keep their hoofs from rotting. The calves may be pastured with their dams after the autumn equinox. Bull calves should not be altered before they are two years old, as they recover with difficulty if the operation is performed sooner, while if it is done later they are apt to be stubborn and useless.

"As in the case of other cattle, the herd should be gone over every year and the culls thrown out because they occupy the room of those which might be profitable. If a cow loses her calf she should be given another to nurse, taken from a cow which has not a sufficient supply of milk. Calves six months old are fed wheat bran and barley meal and young grass, and care should be taken that they are watered morning and evening.

“The rules for taking care of the health of neat cattle are many. I have those which Mago has recorded written out and I take care that my herdsman reads them frequently.

“I have already said that a yearling and a two-year old bull should be provided for every sixty cows, though some have more or less cows in the herd: thus Atticus has two bulls for every seventy cows. Some observe one rule as to the number of cattle to the herd, some another. I am among those who think that one hundred is enough, but Atticus here, like Lucienus, has one hundred and twenty.”

So far Vaccius.

Of asses

VI. While Vaccius was speaking, Murrius had returned with Lucienus and now began:

“I propose to tell about asses as well I may, because I am from Reate where the best and the largest are found; indeed, I have sold to the Arcadians themselves asses of this race and of my own breeding. He who wishes to establish a good herd of asses should see in the first place that he procures jacks and jennies of prime age so that they may breed as long as possible, strong, well made in all parts, of full body and of a good breed, that is to say derived from those localities whence the best specimens come; thus the Peloponnesians, so far as possible, buy asses bred in Arcadia and we in Italy those from the valley of Reate. For if the best of those delicious fish we call *muraenae flutae* are taken on the coast of Sicily and the best sturgeons at Rhodes, it does not follow that they are of equal delicacy in all seas.

“There are two kinds of asses, one wild, which is called the onager, of which there, are many herds in Phrygia and Lycaonia; the other domestic, as they are all over Italy. The onager is fit for use for breeding because he is easily tamed and once domesticated never reverts to a wild life.⁹⁷

“Because their young take after their parents, it is important to choose both jack and jenny of good conformation. The conditions of buying and selling asses are much the same as for other kinds of cattle and include stipulations as to their health and against tort. They are best fed on corn and barley bran. The jennies are bred before the solstice so that they may have their foals at the same season in the following year, for their period of gestation is twelve months. The jennies should be relieved from work while in foal for fatigue at that time injures the offspring: but the jacks, on the contrary, are worked all the time, because it is lack of exercise which is bad for them.

“In the matter of rearing, practically the same rules apply to asses as to horses. The foals are not separated from their dams for the first year after they are born: during the second year they are permitted to stay with their dams at night, but they should then be tied with a loose halter or some other such restraint. In the third year you begin to break them for whatever service they are intended.

“As to the number: they are not usually kept in herds unless it may be for

transport service; generally they are used to turn the mill, or for carrying about the farm, or even for the plough where the soil is light, as in Campania. Herds of asses are some times employed by merchants, like those who transport wine, or oil, or corn, or any other commodity, from Brundisium or Apulia to the sea, by pack trains.”

Of horses

VII. Here Lucienus took up the discourse. “It is my turn,” he said, “to open the barrier and drive in my horses: and they are not only stallions, of which, like Atticus, I keep one for every ten breeding mares, but mares as well, such as Q. Modius Equiculus, that gallant soldier, was wont to esteem for use even in war nearly as much as stallions.”⁹⁸

“He who wishes to have such studs of stallions and mares as may be seen in Peloponnesus and in Apulia should first consider age and see that he obtains them not less than three nor more than ten years old. The age of a horse, as also of nearly all animals whose hoofs are not cloven, even horned animals, may be known from the condition of the teeth: thus at thirty months of age a colt is said to lose the milk incisors from the middle of his mouth, two above and two below. At the beginning of the fourth year, in like manner he sheds the same number, being the incisors adjoining those previously lost, and at that age also the teeth called canine begin to appear. At the beginning of the fifth year he loses two more incisors, and at that time the new teeth show hollow. In the sixth year the new teeth begin to fill out their cavities, and by the seventh usually all have been renewed and the permanent mouth is made. What is the age of a horse beyond this point it is not possible to determine accurately, except that when the teeth project and the eye brows are white and have hollows under them, it is considered that a horse is sixteen years old.

“A breeding mare should be of medium size, for it is not fitting that they should be either very large or very small, but the quarters and belly should be broad.

“A breeding stallion on the other hand should be chosen with a large body, well made and all his parts in harmony. What sort of horse it will turn out to be can be determined from the points of the foal, for it should exhibit a small head: limbs well knit together: a black eye, wide nostrils: ears well pricked: a mane which is thick, dark and curly, of fine hairs and falling on the right side of the neck: a breast broad and well developed: strong shoulders: a moderate belly: the loins flat and rising to the quarters: long shoulder blades: a back bone well doubled [with ridges of meat] but if these are not prominent in no event should the bone itself stand out: a tail large and curly: legs straight and even and rather long: knees round and small and not turned in as you look at them: hard hoofs: veins visible all over the body (for a horse of this kind is fit for treatment when he is sick).

“The breed is of the greatest importance, for there are many. In this respect the celebrated breeds take the names of the countries from which they come:

thus in Greece we have the Thessalian breed: in Italy the Apulian from Apulia, and the Rosean from Rosea.⁹⁹

“It is a sign that they will make good horses if, when at pasture with the herd, the colts contend with one another for superiority in running or in any thing else, or if when a stream is to be crossed they leap it at the head of the herd and do not look back for the others.

“Horses are bought in almost the same manner as cattle or asses, because they change ownership by similar formalities, all of which are set forth in the book of Manilius.

“Horses should be pastured whenever possible in meadows of grass, and in the stable and stall they are fed on hay.

“When a mare has foaled she should be fed on barley and watered twice a day.

“In the matter of breeding, the period of service is from the vernal equinox to the solstice so that the foal may come at a suitable season, for they are supposed to be born on the tenth day of the twelfth month after the mare was stinted. Those which are born after the time are usually defective and unfit for use. When the season has come the stallion should be admitted to the mare twice a day, in the morning and in the evening, under the direction of the *origa* (so the studgroom is called), for a mare held in hand is stinted more quickly, nor does the stallion waste his seed by excess of ardor. When a mare is stinted she makes it known by defending herself. If the stallion shows an aversion for a mare, her parts should be smeared when she is in heat with the marrow of a shrimp macerated in water to the consistency of honey, and the stallion allowed to smell of it.

“Although it may seem incredible, what I am about to relate is true and should be remembered. Once upon a time a studgroom tried to make a stallion cover his mother, but could never get him to come near her: so one day the groom muffled the stallion’s head and put him to his mother successfully: but when the bandage was removed and the stallion saw what he had done, he fell upon the groom and killed him with his teeth.

“When the mares have been stinted it must be seen to that they are worked only in moderation and are kept out of cold places, because cold is of the greatest prejudice to a mare in that condition. For this reason the floor of their stable should be kept dry and the windows and doors should be kept shut: and furthermore the mares should be separated one from another by long poles fastened back from the manger so that they may not fight.

“Mares in foal should neither be over-fed nor starved.

“There are some who breed their mares only every other year and claim they get better colts, on the same principle that as corn land is exhausted by continuous cropping, so is a mare which is bred every year.¹⁰⁰

“The foal should be led out to pasture with its dam on the tenth day after it is born, so to avoid burning its tender hoofs by standing on manure in the stable. When five months old a colt should be fed, whenever he is brought

into the stable, a ration of barley meal whole with its bran, or any other product of the earth which he will eat with appetite. When they are a year old they may be fed barley in the grain mixed with bran, and this should be kept up as long as they suckle, for they should not be weaned until they have completed the second year. From time to time while they are still with their dams they should be handled so that they may not be wild after they are separated. To the same end it is well to hang bridles in their stalls so that while they are still colts they may become accustomed to the sight of them and the sound of their clanking as well. When a colt has learned to come to an outstretched hand you should put a boy on his back, for the first two or three times stretched out flat on his belly, but afterwards sitting upright. The time to do this is when the colt is three years old, for then he has his full growth and is beginning to develop muscles.

“There are those who say that a colt may be broken at eighteen months, but it is better to wait until the third year. Then is the time too to begin to feed him that mixture of grain in the milk which we call *farrago*, for this is very good for a horse as a purgative. It should be fed for ten days to the exclusion of all other food. On the eleventh day and until the fourteenth you should feed barley, adding a little to the ration every day for four days and then maintaining that quantity for the ten days succeeding: during this period the horse should be exercised moderately, and when in a sweat rubbed down with oil. If it is cold a fire should be lit in the stable.

“As some horses are suitable for military service, some for the cart, some for breeding, some for racing, and others for the carriage, it follows that the methods of handling and looking after them all are not the same. Thus the soldier chooses some and rears and trains them for his particular use, and so in turn does the charioteer and the circus rider. Nor does he who wishes a cart horse choose the same conformation or give the same training as to a horse intended for the saddle or the carriage: for as the one desires mettle for military service, the other prefers a gentle disposition for use on the road. It was to provide for this difference of use that the practice of castrating horses was inaugurated, for horses that are altered are of a quieter disposition: they are called geldings, as hogs in the same state are called barrows and chickens are called capons.

“As to medicine for the horse, there are so many symptoms of their maladies and so many cures that the studgroom must have them written down: indeed, on this account in Greece the veterinarians are mostly called [Greek: *hippiatroi*] (horse leeches).”

Of mules

VIII. While we were talking a freedman came from Menas and said that the sacrificial cakes were cooked and every thing ready for the sacrifice — that whoever wishes to take part had only to come.

“But I will not suffer you to go,” I protested, “until you have fulfilled your promise and given me the third chapter of our subject, that concerning mules

and dogs and shepherds.”

“What is to be said about mules,”¹⁰¹ replied Murrius, “may be said briefly. Mules and hinnies are mongrels and grafts as it were on a stock of a different species, for a mule is got by an ass out of a mare, and a hinny by a horse out of a she ass. Both have their uses, but neither is fit to reproduce its kind. For this purpose it is the custom to put a newborn ass colt to nurse to a mare because mares’ milk will make it more vigorous: it is considered better than asses’ milk, or indeed than any other kind of milk. Later they are fed on straw, hay and barley. The foster mother must be given good attention also, as she must bring up her own colt in addition to her service as a wet nurse. An ass raised in this way is fit to get mules when he is three years old, nor will he condemn the mares because he has become used to their kind. If you use him for breeding earlier he will quickly exhaust himself and his get will be poor.

“If you have no ass foal to have brought up by a mare and you wish a breeding jackass, you should buy the largest and handsomest you can find; the best breed, as the ancients said, was that of Arcadia, but nowadays we who know maintain that the breed of Reate is best: where breeding jacks have brought thirty and even forty thousand sesterces (\$1,800-\$2,000).

“Jacks are bought like horses, with the same stipulations and guarantees. We feed them principally on hay and barley, increasing the ration at the breeding season so as to infuse strength into their get by means of their food. The breeding season is the same as for horses, and, like them again, we have the jack handled by a studgroom.

“When a mare has dropped a mule colt or filly we bring it up with care. Those which are born in marshy and swampy country have soft hoofs, but if they are driven up into the mountain in summer, as we do at Reate, their hoofs become hardened.

“In buying mules you must consider age and conformation, the one that they may be able to work under a load, the other that the eye may have pleasure in looking at them: for a team of two good mules is capable of drawing any kind of a wagon on the road.

“You, my friend from Reate,” Murrius added, turning to me, “can vouch for what I have said, as you yourself have herds of breeding mares at home and have bred and sold many mules.

“The get of a horse out of a she ass is called a hinny: he is smaller in the body and usually redder in colour than a mule, and has ears like a horse, but mane and tail like an ass. Hinnies are carried by the dam twelve months, like a horse, and, like the horse too, they are raised and fed, and their age can be told by their teeth.”

Of herd dogs

IX. “It remains,” said Atticus, “to speak of the last of the quadrupeds on our programme, that is to say, of dogs, which are of the greatest importance to us who feed the woolly flock, for the dog is the guardian of such cattle as lack the means to defend themselves, chiefly sheep and goats. For the wolf is wont

to lie in wait for them and we oppose our dogs to him as defenders. Hogs can defend themselves, as well pigs, boars, barrows and sows, for they are near akin to the wild boar, which we know often kills dogs in the woods, with their tusks. What shall I say of large cattle? I know of an instance of a herd of mules pastured together, which, when they were attacked by a wolf, joined in forming a circle about him and killed him with blows of their hoofs: and again, bulls often stand together, rump to rump, and drive off wolves with their horns. But of dogs there are two kinds, hunting dogs, which are used against wild beasts and game, and herd dogs, which are used by the shepherd. I will discuss the latter methodically, following Scrofa's nine heads.

"Of the first importance is the choice of dogs of suitable age, for puppies and old dogs cannot protect themselves, much less the sheep, and so often become themselves the prey of wild beasts.

"In appearance they should be handsome, of good size, with black or tawny eyes: a symmetrical nose: lips blackish or ruddy, neither drawn back above nor hanging underneath: a short muzzle, showing two teeth on either side, those of the lower jaw projecting a little, those above rather straight and not so apparent, and the other teeth, which are covered by the lips, very sharp: a large head, ears large and turned over: a thick crest and neck: long joints: straight legs, rather bowed than knock-kneed: feet large and well developed, so that in walking they may spread out: toes slightly splayed: claws hard and curved: the pad of the foot neither horny nor hard but as it were puffed and soft: short-coupled: a back bone neither projecting nor roached: a heavy tail: a deep bark, and wide gaping chops. The colour to be preferred is white because it gives the dog a lion-like aspect in the dark.¹⁰² Finally, the females should have large teats equally distributed. Care should be taken that they are of good breed, such as those called for their place of origin, Laconian, Epirot and Sallentian. Be careful not to buy a sheep dog from a professional hunter or a butcher, because the one is apt to be lazy about following the flock, while the other is more likely to make after a hare or a deer which it might see, than to tend the sheep.

"It is better either to buy, from a shepherd, dogs which are accustomed to follow sheep or dogs which are without any training at all. While a dog does readily whatever he has been trained to do, his affection is apt to be stronger for the shepherds than for the flock.¹⁰³

"Once P. Aufidius Pontianus of Amiternum bought certain flocks of sheep in further Umbria, the dogs which herded them being included in the bargain, but not the shepherds, who were, however, to make the delivery at the Saltus of Metapontum and the market of Heraclea: when these shepherds had returned home, their dogs, longing for their masters, a few days later of their own will came back to the shepherds in Umbria, having made several days journey without other food than what the fields afforded. Nor had any one of those shepherds done what Saserna advises in his books on agriculture,

‘Whoever wishes to be followed by a dog should throw him a cooked frog.’¹⁰⁴

“It is of importance that all your dogs should be of the same breed, for when they are related they are of the greatest aid to one another.

“Now as to Scrofa’s fourth consideration, that concerning the manner of buying: this is accomplished by delivery by the former owner to the purchaser.

“The same stipulations as to health and against liability for tort are made as in the case of cattle, leaving out whatever is inapplicable to dogs. Some make a price on dogs at so much per head, others stipulate that the puppies shall go with the mother, others that two puppies shall count as one dog — as two lambs usually count as a sheep. Usually it is provided that all the dogs which have been accustomed to be together should be included in the bargain.

“The food appropriate for dogs is more like that of man than of sheep, for they are fed on scraps and bones rather than on grass and leaves. Care must be taken that they are fed regularly, for, if food is not provided, hunger will lead them in search of it away from the flock, unless, indeed, they shall find it in one another, thereby contradicting the old proverb,¹⁰⁵ or perchance they may realize the fable of Actaeon and turn their teeth against their master himself. You would do well to feed them on barley bread soaked in milk, because when they have become accustomed to that diet they will not readily desert the flock. They should never be suffered to taste the flesh of a carrion sheep lest the relish should tempt them to indulge in such food again. They may be fed also broth made out of bones, or bones themselves when broken up, for that makes their teeth stronger and the mouth wider: and thereby the jaws are stretched, while the zest of the marrow makes the dog fiercer. They should be accustomed to take their food in the day time where the flock is feeding and at night where the flock is folded.

“In the matter of breeding it is the practice to line the bitch at the beginning of spring, for then she is said to be in heat, that is to say, to show a readiness for breeding. When they are lined at this season they pup about the solstice, for they go three months. While they are in pup they should be fed barley bread rather than wheat bread, for it is more nourishing and makes more milk.

“In the matter of bringing up the puppies after birth: if there are many in the litter you should choose those you wish to keep and destroy the others: the fewer you keep the better they will be nourished, for then their portion of the mother’s milk will be larger.

“Chaff or some thing else of that sort should be spread under them, because the better they are bedded the more easily they are brought up. Puppies open their eyes twenty days after birth.¹⁰⁶ During the first two months they are not separated from their mother, but wean themselves gradually. A number of puppies should be kenneled together, where they may be encouraged to fight, which will make them fiercer, but they should never be suffered to tire

themselves since weariness develops cowardice. They should also be accustomed to be tied, at first with a light leash, and if they attempt to gnaw it they should be punished by whipping, so that they may not get the habit. On rainy days their kennels should be bedded with leaves or grass, for two reasons: that they may not soil themselves or suffer from cold. Some castrate their puppies thinking them less likely to leave the flock, but others do not, thinking that the operation makes them less fierce. Some rub their ears and between their toes with a suffusion of bitter almonds steeped in water because flies, ticks and fleas usually develop sores in those parts, unless it is your practice to so anoint them. To protect them from wounds from wild beasts we place collars on them, of the kind which we call *melium*, which is a girth around the neck made from strong leather studded with nails and lined with soft leather to protect the neck from being chafed by the hard iron heads of the nails: for if a wolf or other wild beast is once wounded by these nails all the other dogs are safe from his attack, even if they have no collars.

“The number of dogs to be kept is determined by the size of the flock, usually one dog for every shepherd is considered enough, but the practice varies. Thus there should be more in localities where wild beasts are plentiful, and those increase the number also who are wont to drive their flocks over the long forest drift ways to their summer or their winter feeding grounds.

“But two dogs are enough for a flock kept on a farm: in which case they should be male and female, for they are more attached and, by emulation, fiercer, and if one is sick for a protracted time the flock will not be without a dog.”

Here Atticus looked around as if to enquire whether he had omitted any thing.

“This is the silence,” said I, “which summons another player on the boards.”

Of shepherds

X. “The rest of this act,” I added, “relates to how many and what kind of shepherds are necessary.”

Cossinius took the cue. “For large cattle,” he said, “men of full age are required; for small cattle boys will do: but in either case those who drive their flocks and herds on the drift ways must be stouter than those who remain on the farm and return to the steading every day.

“So in the wood pastures (*saltus*) it behooves one to have young men and usually armed men, while on the farm boys or even girls may tend the flock. Those who use the distant feeding grounds should require their shepherds to feed their flocks together all day, but at night to remain each one with his own flock. They should all be under the supervision of one flock master, who should be older and more experienced than the others, because they will obey more cheerfully one who surpasses them in age and knowledge; and yet the flock master should be of such years that he may not be prevented by age from hard work: for neither old men nor boys can endure the steeps of the

drift ways, nor the arduous and roughness of the mountains, which must be suffered by those who follow flocks, especially cattle and goats, to whom the rocks and the forests are pleasant grazing places.

“So far as concerns the conformation of the men chosen for these occupations, they should be strong and swift and active, with ready limbs not only able to follow the cattle but to defend them from the incursions of wild beasts and of brigands: men who can load the packs on the sumpter beasts: can run and throw a javelin.¹⁰⁷

“Every nation is not fit for tending cattle, especially the Basculi and the Turduli [of Spain]. The Gauls are the best of all, particularly for draught cattle.

“In the matter of the purchase of shepherds, there are six usual methods of obtaining lawful title to a slave: (1) by inheritance, (2) by due form of mancipation, which is delivery of possession by one who has the legal right, (3) by the legal process called surrender in court (*cessio in jure*) from one who has that right, the transfer taking place where it should, (4) by prescriptive use (*usucapion*), (5) by purchase of a prisoner of war “under the crown” (6) by auction at the distribution of some one’s property by order of court under the process known as *bonorum emptio*.¹⁰⁸

“The *peculium* or personal property of the slave usually passes with him to a new master unless it is specially excepted in the terms of sale: there is also the usual guaranty as to the health of the slave and that he has committed no theft or tort for which his master is legally responsible, and, unless the purchase is by mancipation, the bargain is bound by an obligation of double indemnity, or in the amount of the purchase price alone, if that is the agreement.

“The shepherds should take their meals separately during the day, each one with his flock, but in the evening they should meet at a common supper under the supervision of the flock master.¹⁰⁹ It should be the duty of the flock master to see that every thing is provided which may be required by the flock or by the shepherds, chiefly the victuals for the men and medicine for the flock: for which the master should provide beasts of burden, either horses or some thing else which can carry a load on its back.

“As to what relates to the breeding of shepherds, it is easy, so far as concerns those who remain on the farm all the time because they can have a fellow servant to wife at the farmstead, for Venus Pastoralis demands no more. Some hold that it is expedient also to furnish women¹¹⁰ for those who pasture the flocks in the Saltus and the forests and have no residence but find their shelter from the rain under improvised sheds: that such women following the flocks and preparing the food for the shepherds keep the men better satisfied and more devoted to their duty. But they must needs be strong though not deformed, and not less capable of work than the men themselves, as they are in many localities and as may be seen throughout Illyricum, where the women feed the flocks or carry in wood for the fire and cook the food, or keep

watch over the household utensils in their cottages.

“As to the method of raising their children, it suffices to say that the shepherd women are usually both mothers and nurses at the same time.”

At this Cossinius looked at me and said: “I have heard you relate that, when you were in Liburnia, you saw women big with child bringing in fire wood and at the same time carrying a nursing child, or even two of them, thus putting to shame those slender reeds, the women of our class, who are wont to lie abed under mosquito bars for days at a time when they are pregnant.”

“That is true,” I replied, “and the contrast is even more marked in Illyricum, where it often happens that a pregnant woman whose time has come will leave her work for a little while and return with a new born child which you would think she had found rather than borne.¹¹¹

“Not only this, the custom of that country permits the girls as much as twenty years of age, whom they call virgins, to go about unprotected and to give themselves to whomever they wish and to have children before marriage.”

“As to what pertains to the health of man and beast,” resumed Cossinius, “and the leech craft which may be practised without the aid of a physician, the flock master should have the rules written down: indeed, the flock master must have some education, otherwise he can never keep his flock accounts properly.¹¹²

“As to the number of shepherds, some make a narrow, some a broad, allowance. I have one shepherd for every eighty long wool sheep: Atticus here has one for every hundred. One can reduce the number of men required in respect of large flocks (like those containing a thousand head or more) much more readily than in respect of comparatively small flocks, like Atticus’ and mine, for I have only seven hundred head of sheep, and you, Atticus, have, I believe, eight hundred, though we are alike in providing a ram for every ten ewes. Two men are required to care for a herd of fifty mares: and each of them should have a mare broken for riding to serve as a mount in those localities where it is the custom to drive the mares to pasture, as often happens in Apulia and Lucania.”

Of milk and cheese and wool

XI. “And now that we have fulfilled our promise, let us go,” said Cossinius.

“Not until you have added some thing,” I cried, “concerning that supplemental profit from cattle which was promised; namely, of milk and cheese and the shearing of wool.”

So Cossinius resumed:

“Ewes’ milk, and, after it, goats’ milk, is the most nourishing of all liquids which we drink. As a purgative, mares’ milk ranks first, and, after it, in order, asses’ milk, cows’ milk and goats’ milk, but the quality depends upon what has been fed to the cattle, upon the condition of the cattle, and upon when it is

milked.

“So far as concerns the food of the cattle, milk is nourishing which is made from barley and stover and other such kinds of dry and hard cattle food.

“So far as concerns its purgative qualities, milk is good when made from green stuff, especially if it is grass containing plants which, taken by themselves, have a purgative effect upon the human body.

“So far as concerns the condition of the cattle, that milk is best which comes from cattle in vigorous health and from those still young.

“So far as concerns the time of milking, that milk is best which comes neither from a ‘stripper’ nor from a recently fresh dam.

“The cheese made of cows’ milk is the most agreeable to the taste but the most difficult to digest: next, that of ewes’ milk, while the least agreeable in taste, but the most easily digested, is that of goats’ milk.

“There is also a distinction between cheese when it is soft and new made and when it is dry and old, for when it is soft it is more nourishing and digestible, but the opposite is true of old and dry cheese.

“The custom is to make cheese from the rising of the Pleiades in spring to their rising in summer, and yet the rule is not invariable, because of difference in locality and the supply of forage.

“The practice is to add a quantity of rennet, equal to the size of an olive, to two *congi* of milk to make it curdle. The rennet taken from the stomachs of the hare and the kid is better than that from lambs, but some use as a ferment the milk of the fig tree mixed with vinegar, and some times sprinkled with other vegetable products. In parts of Greece this is called [Greek: opos], elsewhere [Greek: dakruos].”

“I am prepared to believe,” I said, “that the fig tree standing beside the chapel of the goddess Rumina¹¹³ was planted by shepherds for the purpose you mention, for there is it the practice to make libations of milk rather than of wine or to sacrifice suckling pigs. For men used to use the word *rumis* or *ruma* where we now say *mamma*, signifying a teat: hence even now suckling lambs are called *subrumi* from the teat they suck, just as we call suckling pigs *lactantes* from *lac*, the milk that comes from the teat.”

Cossinius resumed:

“If you sprinkle your cheese with salt it is better to use the mineral than the marine kind.

“Concerning the shearing of sheep, the first thing to be looked into before you begin is that the sheep are not suffering from scab or sores, as it is better to wait, if necessary, until they are cured before shearing.

“The time to shear is between the vernal equinox and the summer solstice, when the sheep begin to sweat (it is the sweat which gives new clipped wool its name *sucida*). As soon as the sheep are sheared they are smeared with a mixture¹¹⁴ of wine and oil, some add white wax and hogs’ grease. If they are sheep which are kept blanketed, the inside of the blanket should be anointed with this mixture before it is put on again.

“If the sheep has suffered any wound during the shearing, it should be treated with liquid tar.

“Long wool sheep are usually sheared about the time of the barley harvest: in some places before the hay harvest.

“Some men shear their sheep twice a year, as in hither Spain, investing double work because they think they get more wool, just as some men mow their meadows twice a year. Careful shepherds are wont to shear on a mat so as not to lose any of the wool. A clear day should be chosen for the shearing and it is usually done between the fourth and the tenth hours (10 a.m.-4 p.m.) since wool sheared in the hot sun is softer, heavier and of better colour by reason of the sweat of the sheep. Wool which has been collected and packed in bags is called *vellera* or *velamina*, words derived from *vellere*, to pull, whence it may be concluded that the practice of pulling wool is older than shearing. Those who pull the wool today make a practice of starving their sheep for three days before, because when they are weak the wool yields more readily.”

“Speaking of shearing,” I said, “it is reported that the first barbers were brought into Italy from Sicily in the year 453 after the foundation of Rome (B.C. 300) by P. Ticinius Menas, as appears from the inscription in the public square of Ardea. The statues of the ancients show that formerly there were no barbers because most of them have long hair and a heavy beard.”¹¹⁵

Cossinius resumed:

“As the wool of the sheep serves to make clothes, so the hair of goats is employed: on ships, in making military engines and certain implements of industry. Certain nations, indeed, are clad in goat skins, as in Gaetulia and Sardinia. Their use for this purpose by the ancient Greeks is apparent, because old men in the tragedies are called [Greek: diphtheriai], from the fact that they were clad in goat skins: and it is the custom also in our comedies to dress rustic characters in goat skins, like the youth in the *Hypobolimaeus* (the Counterfeit) of Caecilius, and the old man in the *Heautontimorumenos* (the Self Tormentor) of Terence.

“It is the practice to shear goats in the greater part of Phrygia because there the goats have heavy coats, of which cilicia (so called because the practice of shearing goats began in the city of that name) and other hair cloth materials of that kind are made.”

With this Cossinius stopped, and, while he was waiting for criticism of what he had said, Vitulus’ freedman, coming into town from the gardens [of his master] turned to us and said, “I was on my way to your house to invite you to come early so as not to shorten the holiday.”

And so, my dear Turranius Niger, we separated: Scrofa and I going to the gardens of Vitulus; the others, some home and some to see Menas.

BOOK III

THE HUSBANDRY OF THE STEADING

Introduction: the antiquity of country life

I

There are two modes of human life, my dear Pinnius, which are manifestly as different in the time of their origin as they are in their habitat, that of the country and that of the town. Country life is much the more ancient, for time was when men lived altogether in the country and had no towns: indeed, the oldest town in Greece, according to the tradition, is the Boeotian Thebes, which was founded by King Ogyges, and in our own land that of Rome, founded by King Romulus of which now it may be affirmed with confidence, as was not possible when Ennius wrote:

“’Tis seven hundred years, or more or less,
Since first illustrious Rome began her sway,
With hallowed augury.”

Now, if it is admitted that Thebes was founded before the deluge, which is known by Ogyges’ name, its age is not more than about twenty-one hundred years: and if that period is compared with the lapse of time since men began to cultivate the land and to live in huts and hovels, knowing naught of city walls and gates, it is evident that life in the country preceded life in town by a tale of immemorial years. Nor is this to be wondered at since ‘God made the country and man made the town.’¹¹⁶ While the tradition is that all the arts were invented in Greece within a thousand years, there never was a time when the earth could not be cultivated. And, as life in the country is the more ancient, so it is the better life: for it was not without good reason that our ancestors were wont to plant colonies of citizens in the country, because by them they were both fed in times of peace and protected in times of war: nor was it without significance that they called both the Earth and Ceres by the common name of Mother and esteemed that those who worshipped her lead a life at once pious and useful and were the sole representatives left on earth of the race of Saturn. A proof of this is that the mysteries peculiar to the cult of Ceres were called *Initia*, the very name indicating that they related to the beginning of things.

A further proof that country life was earlier than that of town is found in the name of the town of Thebes, which was bestowed from the character of its situation rather than from the name of its founder: for in the ancient language, and among the Aeolians who had their origin in Boeotia, a small hill is called *tebas* without the aspirate; and in the Sabine country, where Pelasgians from Greece settled, they still have the same locution: witness that hill called Tebae which stands in the Sabine country on the via Salaria not far from the mile stone of Reate. At first agriculture was conducted on so small a scale that it

had little distinction, since those who followed it, being sprung from shepherds, at once sowed their corn and pastured their flocks on the same land, but as later this art grew in importance the husbandry of live stock was separated, and it befel that some men were called farmers and others shepherds.

The art of feeding live stock should really be divided into two branches, as is not yet fully appreciated, one relating to the stock kept at the steading, the other to the stock pastured in the fields. The latter, which is designated by the name *pecuaria*, is well known and highly esteemed so that rich men, either lease or buy much pasture land in order to carry it on: the other, which is known as *villatice*, has, because it seemed to be of less importance, been treated by some as an incident of the husbandry of agriculture, when in fact it should be made a part of the husbandry of live stock: nor has it been described separately and at length by any one, so far as I know.

And so, as I think that there are three branches of farm management which are undertaken for profit, namely: agriculture, live stock and the industries peculiar to the steading, I have planned three books, of which I have already written two, the first concerning the husbandry of agriculture, which I dedicated to my wife Fundania, and the second concerning the husbandry of live stock to Turranius Niger: the third, relating to the profits of those industries which are carried on at the steading, I now send herewith to you; for the fact that we are neighbours and entertain a mutual affection seems to demand that it should be dedicated to you above all others.

Although you have a villa, which is remarkable for the beauty of its workmanship within and without, and for the splendour of its mosaic pavements, still you deem it to be bare unless you have the walls decorated also with books: so in like manner that your villa may be more distinguished by the profits you derive from it than by the character of its construction, and that I may be of assistance to that end, so far as may be, I have sent you this book, which is a summary of some conversations which we have had on the subject of what makes the perfectly equipped villa: and so I begin as follows:

Of the definition of a Roman villa

II. The Senator Q. Axius, my fellow tribesman, and I had cast our votes at the comitia for the election of aediles, and, although it was the heat of the day, we wished to be on hand when the candidate whom we were supporting should go home. So Axius said to me: "What would you think of taking shelter in the *villa publica*¹¹⁷ while the votes are being sorted rather than in the booth of our candidate." "I hold," said I, "not only with the proverb that bad advice is worst for him who gives it, but that good advice is good for both the giver and the taker."

And so we made our way to the *villa publica*, where we found Appius Claudius,¹¹⁸ the Augur, seated on a bench waiting for any call for his services by the Consul: on his left was Cornelius Merula (blackbird) of the Consular family of that name, and Fircellius Pavo (pea-cock) of Reate, and on his right

Minutius Pica (mag-pie) and M. Petronius Passer (sparrow). When we had approached them Axius, smiling, said to Appius: "May we come into your aviary where you are sitting among the birds?"

"By all means," replied Appius, "and especially you who set before me such birds as still make my mouth water, when I was your guest a few days ago at your Reatine villa on my way to lake Velinus to settle the controversy between the people of Interamna and Reate.¹¹⁹

"But" he added, "is not this villa, which our ancestors constructed, simpler and so better than that elaborate one of yours at Reate: do you see any where here any furniture of citrus wood or ormolu, any decorations of vermilion or blue, any tessellations or mosaic work, all of which on the other hand were displayed in your house? And while this is open to the entire people, yours is available to you alone: this is the resort for the citizens after the comitia in the Campus Martius, and for all alike, while yours is reserved for mares and asses. And furthermore it should be considered that this building is useful in carrying on the public business, for here the consuls review the army on parade, here the arms are inspected, here the censors enumerate the people."

"Tell me," retorted Axius, "which is useful, this villa of yours giving on the Campus Martius, more extravagantly arrayed with objects of art than all Reate put together, so bedizened is it with pictures and garnished with statues, or mine where there is no trace of the artists Lysippus or Antiphilus, but there are many of the farm hand and the shepherd?"

"And since there can be no villa where there is no farm and that well cultivated, how can you call this house of yours a villa which has no land appurtenant to it and no cattle or horses? Again, tell me, pray, how does your villa compare with that of your grandfather and great grandfather, for one cannot see at yours, as one could always see at theirs, cured hay in the mows, the vintage in the cellar, and the harvest in the granary? Because, forsooth, a house is situated out of town, it is no more a villa for that reason than the houses of those who dwell beyond the Porta Flumentaria or in the Aemiliana suburb."

"Since it appears that I do not know what a villa is," replied Appius, smiling, "I wish you would be good enough to instruct me, so that I may not make a fool of myself, as I am planning to buy from M. Seius his villa at Ostia: for if a mere house is not a villa unless it is equipped with a jackass costing forty thousand sesterces (\$2,000), like that you showed me at your place, I fear that I would be making a mistake in buying Seius' house on the shore at Ostia in the belief that it is a villa. But it was our friend Merula here who put me in mind of buying this house, for he told me that he had spent several days there and that he had never seen a more delightful villa, and yet he saw there no paintings, nor any bronze or marble statues, neither did he see any wine press, or oil mill, or oil jars."

"And what kind of a villa is this," said Axius, turning to Merula, "where there are neither the ornaments of a town house nor the utensils of a farm?"

“Do you consider,” said Merula, “that your house on the bank of Velinus, which neither painter nor architect has ever seen, is any less a villa than the one you have in Rosea so elegantly decorated with the work of an architect and which you share with your famous jackass?”

Axius admitted, with a nod, that a simple farm house was as much entitled to be called a villa as any house which united the characteristics of both town and country, and asked what he deduced from this.

“What?” said Merula. “Why, if your estate in Rosea is to be approved by reason of the husbandry which you carry on, and is properly called a villa because there cattle are fed and stabled, then, by the same reasoning, all those houses should be called villas in which large profits are derived from husbandry: for what difference does it make whether you derive your profit from sheep or from birds? Is the income any sweeter which comes from cattle in which bees are generated, than from the bees themselves, such as work in their hives at the villa of Seius? Do you sell to the butcher the hogs which you raise at your farm for more than Seius sells his wild boars to the meat market?”

“Am I any less able,” replied Axius, “to have these things at my farm at Reate: is Sicilian honey made at Seius’ place and only Corsican honey at Reate,¹²⁰ and does the mast which he buys for his wild boars make them fat while that which I get for nothing from my woods makes mine lean?”

“But,” said Appius, “Merula does not deny that you *can* carry on at your villa the kind of husbandry which Seius does at his, yet I myself have seen that you don’t.

“For there are two kinds of husbandry of live stock: one in the fields, as of cattle; and the other at the stading, as of chickens and pigeons and bees and other such things which are usually kept at a villa.

“About the latter, Mago the Carthaginian, and Cassius Dionysius and others have treated specially in different parts of their books, and it would seem that Seius has read their precepts and so has learned how to make more profit from his villa alone by such husbandry than others make out of an entire farm.”

“Certainly,” agreed Merula, “for I have seen there great flocks of geese, chickens, pigeons, cranes and pea-cocks: also dormice, fish, wild boars and other such game.¹²¹ The freedman who keeps his books which Varro has seen, assured me when he was doing the honours in the absence of his master, that Seius derives an income of more than fifty thousand sesterces (\$2,500) per annum from his villa.”

As Axius seemed astonished, I asked him: “Surely you know the estate of my aunt in the Sabine country which is at the twenty-fourth mile stone from Rome on the via Salaria.”

“Of course, I do,” Axius replied, “for it is there that I am wont to divide the day in summer on my way from Reate to town and to spend the night when I come thence in winter.”

“Well,” I continued, “in that villa there is an aviary from which I know that there were taken in one season five thousand thrushes, which, at three deniers apiece, means that that department of the establishment brought in a revenue of sixty thousand sesterces that year, or twice the yield of the entire two hundred jugera of your farm at Reate.”¹²²

“What, sixty thousand,” exclaimed Axius, “sixty thousand: you are making game of me!”

“Sixty thousand,” I affirmed, “but in order that you might realize such a lucky throw you will require either a public banquet or a triumph on the scale of that of Scipio Metellus, or club dinners, which indeed have now become so frequent as to raise the price of provisions of the market.”

“You will perchance expect this return every year,” said Merula, “so I trust that your aviary may not lead you into a loss. But surely in such good times as these it could not happen that you would fail, except rarely, for what year is there that does not see such a feast or a triumph, or club dinners, such as now-a-days consume victuals without number. Nay,” he added, “it seems that in our habit of luxury such a public banquet is a daily occurrence within the gates of Rome.”¹²³

To supplement the examples of such profits: L. Albutius, a learned man and, as you know, the author of certain satires in the manner of Lucilius, has said that the returns from feeding live stock on his Alban farm are always less than his income from his villa, for the farm yields less than ten thousand sesterces and the villa more than twenty. He even maintains that if he should establish a villa near the sea in such a place as he might choose he could derive from it an income of more than a hundred thousand sesterces. Did not M. Cato recently sell forty thousand sesterces worth of fishes from the fish ponds of Lucullus after he had accepted the administration of his estate?”

“My dear Merula,” exclaimed Axius, “take me, I beg of you, as your pupil in the art of the husbandry of the stading.”

“I will begin,” replied Merula, “as soon as you promise me a minerval in the form of a dinner.”¹²⁴

“You shall have it,” said Axius, “both today, and hereafter as well, off those delicacies you will teach me to rear.”

“I fear,” replied Merula, “that what you may offer me at the beginning of your experience with villa feeding will be dead geese or deceased pea-cocks.”

“And what difference will it make to you,” retorted Axius, “if I do serve you fish or fowl which has come to an untimely end: for in no event could you eat them unless they were dead: but I beg you,” he added, “matriculate me in the school of villa husbandry and expound to me the theory and the practice of it.”

Merula accepted the invitation cheerfully.

Of the Roman development of the industries of the stading

III. “In the first place,” he said, “you should know what kind of creatures you may raise or feed in or about a villa, either for your profit or for your

pleasure. There are three divisions for this study: poultry houses, warrens and fish ponds.

“I include under the head of poultry houses the feeding of all kinds of fowls which are usually kept within the walls of a steading: under the head of warrens not merely what our great grandfathers meant — places where rabbits were usually kept — but any enclosure adjoining a villa in which game animals are enclosed to be fed. In like manner I include under the head of fish ponds all those places in which fish are kept at a villa either in fresh or salt water.

“Each of these divisions may be separated into at least two parts: thus the first, that with respect to poultry houses, should be treated with reference to a classification of fowls as between those which are content on land alone, such as pea-cocks, turtle doves, thrushes; and those which require access to water as well as land, such as geese, widgeons and ducks. So the second division, that relating to game, has two different classifications: one which includes the wild boar, the roe buck and hares; the other bees, snails and dormice.

“The third, or aquatic division, likewise has two classifications, one including fresh water fish, the other salt water fish.

“In order to secure and maintain a supply of these six classes of stock it is necessary to provide a force of three kinds of artificers, namely: fowlers, hunters and fishermen, or else you may buy breeding stock from such men, and trust to the diligence of your servants to rear and fatten their offspring until they are ready for market. Certain of them, such as dormice, snails and chickens, may, however, be obtained without the aid of a hunter’s net, and doubtless the business of keeping them began with the stock native to every farm: for the breeding even of chickens has not been a monopoly of the Roman augurs, to make provision for their auspices, but has been practised by all farmers from the beginning of time.¹²⁵ From such a start in the kind of husbandry we are now discussing, the next step was to provide masonry enclosures near the steading to confine game, and these served as well for shelter for the bee-stand, for originally the bees were wont to make their hives under the eaves of the farm house itself.

“The third division, that of keeping fish, had its origin in simple fresh water ponds in which fish taken in the streams were kept.

“There have been two steps in the development of each of these three conveniences; the earlier distinguished by the ancient simplicity, the later by our modern luxury. The earlier stage was that of our ancestors, who had but two places for keeping poultry: one the court yard of the steading in which chickens were fed and their profit derived from eggs and pullets, the other above ground, for their pigeons were kept in the dormers or on the roof of the farm house.

“Now-a-days, on the contrary, what our ancestors called hen-houses are known as *ornithones*, and serve to house thrushes and pea-cocks to cater to the delicate appetite of the master: and indeed such structures now have larger

roofs than formerly sufficed to cover an entire farm house.

“Such has been the progress in respect of warrens also: your father, Axius, never saw any game but rabbits, nor did there exist in his time any such extensive enclosures as now are made, many jugera in extent, to hold wild boars and roe bucks. You can witness,” he said, turning to me, “that you found many wild boars in the warren of your farm at Tusculum, when you bought it from M. Piso.”

In respect of the third class, who was there who used to have any kind of a fish pond, except of fresh water, stocked merely with cat fish and mullets, while today our elegants declare that they would as soon have a pond stocked with frogs as with those fish I have named. You will recall the story of Philippus when he was entertained at Casinum by Ummidius: a pickerel caught in your river, Varro, was put before him, he tasted it and forthwith spat it out, exclaiming “May I perish, but I thought it was fish!”¹²⁶

As the luxury of this age has enlarged our warrens, so has it carried our fish ponds even to the sea itself and has herded shoals of sea fish into them. Have not Sergius Orata (goldfish) and Licinius Murena (lamprey) taken their cognomens from fishes for this reason? And who does not know the fame of the fish ponds of Philippus, of Hortensius, and of the brothers Lucullus?

“Where, then, Axius, do you wish me to begin?”

Of aviaries

IV. “I prefer,” replied Axius, “that you should begin with the sequel — *postprincipia*, as they say in the camps — that is, with the present day rather than with the past, because the profits from pea-cocks are greater than those from hens, I will not dissemble that I wish to hear first of *ornithones* because the thrushes which are kept in them make the very name sound like money: indeed, the 60,000 sesterces of Fircelina have consumed me with avarice.”

“There are two kinds of *ornithones*,” replied Merula; “one for pleasure, like that so much admired which our friend Varro here has at his villa near Casinum: the other for profit, such as are maintained commercially, some even indoors in town, but chiefly in the Sabine country which abounds in thrushes. There is a third kind, consisting of a combination of the two I have mentioned, such as Lucullus maintained at his Tusculan villa, where he contrived a dining room under the same roof as his aviary to the end that he might feast delicately, satisfying two senses, now by eating the birds cooked and spread on a platter, now by seeing them flying about the windows: but the truth is that he was disappointed, for the eyes did not take as much pleasure from the sight of the flying birds as the nostrils were offended by their odour.”

a. For profit

V. “But, as I gather you would prefer, Axius, I will speak of that kind of *ornithon* which is established for profit, whence, but not where, fat thrushes are served.

“For this purpose is built a dome, in the form of a peristyle, with a roof over it and enclosed with netting, sufficiently large to accommodate several

thousand thrushes¹²⁷ and blackbirds; indeed, some also include other kinds of birds, such as ortolans and quail, which sell for a good price when fat. Into this enclosure water should be conducted through a conduit and so disposed as to wind through the aviary in channels narrow enough to be cleaned easily (for if the water spreads out it is quickly polluted and rendered unfit to drink) and draining like a running stream to find its vent through another conduit, so that the birds may not be exposed to the risk of mud. The door should be low and narrow and well balanced on its hinges like the doors they have in the amphitheatres where bulls are fought: few windows and so placed that the birds cannot see trees and wild birds without, for that makes the prisoners pine and grow thin. The place should have only so much light as may be necessary to enable the birds to see where they are to perch and to eat and drink. The doors and the windows should be lightly stuccoed round about to keep out rats and other such vermin.

“Around the wall of the building on the inside are fastened many perches where the birds can sit, and another such convenience should be contrived from poles set on the ground and leaning against the walls and tied together with other poles fastened transversely at regular intervals, thus giving the appearance of the rising degrees of a theatre. Down on the ground near the drinking water you should place the birds’ food, which usually consists of little balls of a paste made out of figs and corn meal: but for twenty days before you intend to market your thrushes it is customary to feed them more heavily, both by giving them more food and that chiefly of finer meal.

“In this enclosure there should also be cages with wooden floors which may serve the birds as resting places supplementing the perches.

“Next to the aviary should be contrived a smaller structure, called the *seclitorium*, in which the keeper may array the birds found dead, to render an account of them to his master, and where he may drive the birds which are ready for market from the larger aviary: and to this end this smaller room is connected with the main cage by a large door and has more light: and there, when he has collected the number he wishes to market, the keeper kills them, which is done secretly, lest the others might despond at the sight and themselves die before they are ready for market.

“Thrushes are not like other birds of passage which lay their eggs in particular places, as the swan does in the fields and the swallows under the roof, but they lay anywhere: for, despite their masculine name (*turdus*) there are female thrushes, just as there are male blackbirds, although they have a purely feminine name (*merula*).

“All birds are divided as between those which are of passage, like swallows and cranes, and those which are domestic, like chickens and pigeons: thrushes are birds of passage and every year fly from across the sea into Italy about the time of the autumn equinox, returning about the spring equinox. At another season doves and quail do the same in immense numbers, as may be seen in the neighbouring islands of Pontia, Palmaria and

Pandataria, for there they are wont to rest a few days on their arrival and again before they set out across the sea from Italy.”

b. For pleasure

“So,” said Appius to Axius, “if you enclose five thousand thrushes in such an aviary as Merula has described and there happens to be a banquet or a triumph, you will gain forthwith that sixty thousand sesterces which you so keenly covet and be able to lend the money out at good interest.” And then, turning to me, he added, “Do you tell us of that other kind of ornithon, namely: for pleasure merely, for it is said that you have constructed one near Casinum which surpasses not only the original built by the inventor of such flying cages, our friend M. Laenius Strabo of Brundisium (who was the first to keep birds confined in the chamber of a peristyle and to feed them through the net), but also the vast structures of Lucullus at Tusculum.”

“You know,” I said, “that there flows through my estate near Casinum¹²⁸ a stream which is both deep and clear and fifty-seven feet wide between the masonry embankments, so that it is necessary to use bridges to get from one part of the property to the other. On the upper reach of this stream is situated my Museum¹²⁹ and at a distance of 950 feet below is an island formed by the confluence of another stream. Along the bank for this distance is an uncovered walk ten feet broad and between this walk and the field is the location of my aviary enclosed on both sides, right and left, with high masonry walls. The *ornithon* itself is built in the shape of a writing tablet with a capital on it, the main quadrangle being forty-eight feet wide and seventy-two feet long, the capital semi-circular with a radius of twenty-seven feet. To this a covered walk or portico is joined, as it were across the bottom of the page of the tablet, with passages leading on either side of the *ornithon* proper which contains the cages, to the upper end of the interior quadrangle [*adjoining the capital*]. This portico is constructed of a series of stone columns between which and the main outside walls are planted dwarf shrubs, a net of hemp being stretched from the top of the walls to the architrave of the portico, and thence down to the stylobate or floor. The exterior spaces thus enclosed are filled with all kinds of birds which are fed through the net, water being provided by a small running stream. On the interior sides of the porticos, and adjoining them at the upper end of the interior quadrangle, are constructed on both sides two narrow oblong basins. Between these basins a path leads to the *tholus*, or rotunda, which is surrounded with two rows of columns, like that in the house of Catulus, except that I have substituted columns for walls. Beyond these columns at the end is a grove of large transplanted trees forming a roof of leaves, but admitting light underneath, as that is entirely cut off by the high walls on the sides. Between the exterior row of columns of the *tholus*, which are of stone, and the interior row, which are of pine, there is a narrow space, five feet in width. The exterior columns are filled in with a transparent net instead of walls, thus permitting the birds to look out upon the grove and the wild birds there but without escaping: the

interior columns being filled in with the net of the main aviary. The space between the two rows of columns thus enclosed is equipped with perches for the birds in the form of many rods let into all the columns in ascending array like the degrees of a theatre; and here are enclosed all kinds of birds, but chiefly singing birds, like nightingales and blackbirds, for whom water is conducted by means of a small canal and food is supplied under the net. [*Under the lantern of the tholus is a basin of water: and around this*] a foot and nine inches below the stylobate or pedestal of the interior row of columns, runs a stone platform. This is five feet in width and two feet above the level of the basin, thus affording a space on which my bird guests may hop about from the cushions to the little columns [*which are there provided for them*].¹³⁰

“The basin is immediately surrounded with a quay a foot in width adjoining [but below the level of] the platform and has a little island in the middle. Around the platform and the quay are contrived docks for ducks. On the island is a little column arranged to turn on its axis and carrying a wheel-shaped table with hollow drum-like dishes fashioned at the ends of the spokes two and a half feet wide and a palm in depth. This is turned by a boy whose business that is, so that meat and drink is put before all my bird guests in turn. From the elevation of the platform, where mats are usually placed, the ducks go out to swim in the basin, and from this streams flow into the two basins I have already described, and little fish may be seen darting from one to the other, while warm or cold water may be turned on the guests from the circumference of the revolving table, which I have described as equipped with spokes.

“Within the dome is an arrangement to tell the hours by marking the position in the heavens of the sun by day and Hesperus by night: and furthermore, as in the clock which [Andronicus] Cyrrestes constructed at Athens, the eight winds are depicted on the dome, and, by means of an arrow connecting with a vane, the prevailing wind is indicated to those within.”¹³¹

As we were talking an uproar was heard on the Campus Martius. While this did not astonish old parliamentary hands¹³² like ourselves, who knew the enthusiasm of an election, yet we were anxious to know what it meant, and at this moment Pantuleius Parra came up and told us that while the votes were being sorted some one was caught stuffing the ballot box¹³³ and had been haled before the consul by the supporters of the rival candidate. Pavo rose to go, for it was understood that he who had been arrested was the campaign manager of Pavo’s own candidate.

Of pea-cocks

VI. “Now that Fircellius is gone you can speak freely of pea-cocks,” said Axius, “for if you should say any thing to their disadvantage in his presence, you might perchance have a crow to pluck with him on account of his relationship.”¹³⁴

“Within my memory,” said Merula, “the practice of keeping commercial flocks of pea-cocks has largely developed and it has so developed that M.

Afudius Lurco is said to derive an income of sixty thousand sesterces per annum from them. If you keep them for profit it is well to have somewhat fewer males than females; while the contrary is true if you keep them for pleasure, for the pea-cock far surpasses his hen in beauty. With us they are fed in the country, but abroad it is said that they are kept on islands, as at Samos in the grove of Juno and at Planasia, the island of M. Piso. In setting up a flock age and beauty must be considered, for nature has given the palm of beauty to the pea-cock among all the birds. The hens are not fit for breeding under two years of age, nor when they are aged. They are fed all kinds of grain but chiefly barley. Scius makes a practice of feeding them a modius of barley apiece for the month before they begin to breed, his purpose being to make them more productive. He expects his overseer to raise three pea fowl for every hen, and he sells them when matured for fifty deniers (\$10) a piece, a price such as one never obtains for a sheep.¹³⁵

“Furthermore, he buys eggs and sets them under dunghill hens, transferring the young pea fowls so hatched to the shelter set apart for their kind. This house should be built large enough for the number of pea fowl to be kept and should be equipped with separate roosting places smoothly stuccoed, so that snakes and such vermin may not be able to get into it: and, furthermore, it should have attached to it a run in which the pea fowl may feed on sunny days, and both these places should be kept clean, as this kind of fowl demands. The keeper should make the rounds often with a shovel to collect and preserve their manure, which is not only fit for use in agriculture but serves also as bedding for your pea chicks.

“It is said that Q. Hortensius was the first to serve pea-cocks at dinner, on the occasion of his inauguration as an augur, an evidence of prodigality which was more approved by the luxurious than by good men of simple manners: but many others quickly followed his example, so that the price of pea fowl was raised until an egg sold for five deniers (\$1) and a pea fowl itself readily for fifty (\$10), thus a flock of an hundred of them easily yields an income of forty thousand sesterces, (\$2,000), or even sixty (\$3,000), if, as Abuccius advises, one obtains three chickens from every pea hen.”

Of pigeons

VII. In the meanwhile an apparitor came to Appius from the Consul and said that the augurs were summoned. As Appius went out from the *villa publica*, a flock of pigeons flew in, whereupon Merula said to Axius: “If you had established a [Greek: peristerogropheion] you would think that these were your pigeons, although they are wild, for it is the custom to keep both kinds in a [Greek: peristerotropheion]. One is the wild dove (or, as some call them the rock dove, or *saxatilis*), such as live in the towers and dormers (*columines*) of a farm house, whence they get the name *columbae*, because, on account of their natural timidity, they seek the highest places on the roof. On this account wild doves usually frequent towers, to which they may fly from the fields of their own accord, and return.¹³⁶ The other kind of pigeons is tamer and are

wont to seek their food at the very threshold of a house. This kind is usually white in colour, the wild variety being mottled but without any white. From these two stocks a third or mixed variety has been developed for commercial profit and these are collected in the place which some call a *peristereon* (pigeon house), and others a *peristerotropheion* (place for raising pigeons), where there are often confined as many as five thousand at a time.

“A pigeon house is made like a great dome, with arched roof, a narrow entrance, and grilled windows or with wider lattices on all sides so that the interior may be well lighted and yet no snake or other such pest may have access. The walls and the dome within and the edges of the windows without should be smeared with light stucco to keep out rats and lizards, for nothing is so timid as a pigeon. A round nest should be provided for each pair of pigeons and these should be arranged in close order so that there may be established as many as possible of them ranked from the ground to the very dome. Each nest should have a door no bigger than necessary to enable the pigeons to go in and out but within should be of three palms in diameter. Under each rank of nests should be fastened planks two palms broad for the use of the pigeons as a vestibule on coming out. Water should be led into the pigeon house, both for them to drink and to bathe in, for pigeons are very clean birds. For this reason the keeper of the pigeons should sweep out the house several times a month, for that which soils it has so great a value in agriculture that some writers even claim that it is the best of all manures. Furthermore, the keeper in these rounds may tend any pigeon which is ailing, remove any which are dead, and take out such squabs as are fit for market. Likewise, those which are setting should be transferred to a particular place, separated from the others by a net but from which the mothers may be free to get out of doors: which is done for two reasons: first, because if they become weary or decrepit from being cooped too long, they will be refreshed by the free air when they go abroad: secondly, because they serve as decoys for other pigeons, for their squabs will always bring them home themselves unless they are struck down by a crow or cut off by a hawk. Pigeon breeders rid themselves of the last mentioned pests by planting in the ground two rods smeared with birdlime and bent in one upon the other, and then tie on some bait so disposed that when the hawk falls upon his prey he finds himself entangled in the birdlime and is taken.

“It may be noted that the pigeon has a homing instinct, as is proved by the practice of many in letting pigeons loose from their bosoms in the theatre expecting them to return home, for if they did not return the practice would not persist.

“The food for pigeons is placed in mangers fastened around the walls and filled from the outside by means of conduits. They thrive on millet, wheat, barley, peas, beans and vetch. This regimen should be followed also, as far as possible, in the care of the wild pigeons, which live on the towers and the roofs of the barn.

“In equipping a [Greek: *peristereon*] pigeons of good age should be

secured, neither squabs nor veterans, and as many males as females. Nothing is more prolific than the pigeon, for in forty days they conceive, lay, hatch and raise a brood, and they keep this up nearly all the year, stopping only from the winter solstice until spring. Squabs are hatched in pairs, and as soon as they have grown up and have strength breed with their own mothers. Those who fatten squabs in order to sell them dearer, make a practice of isolating them as soon as they are covered with feathers, then they cram them with white bread which has been chewed:¹³⁷ in winter this is fed twice a day, in summer three times a day, morning, noon and night, the midday meal being omitted in winter. Those which are just beginning to have feathers are left in the nests, but their legs are broken, and, in order that they may be crammed, the food is put before the mothers, for they will feed themselves and their squabs on it all day long. Squabs which are reared in this way become fat more quickly than others and have whiter flesh.

“A pair of pigeons will commonly sell at Rome for two hundred *nummi*, if they are well made, of good colour, without blemish, and of good breed: some times they even bring a thousand *nummi*, and there is a report that recently L. Axius, a Roman of the equestrian order, declined that sum, refusing to sell for less than four hundred deniers.”¹³⁸

“If I could procure a fully equipped [Greek: peristereon],” cried Axius, “as readily as I have bought a supply of earthen ware nests, I would have had it already on the way to my farm.”

“As if,” remarked Pica, “there were not many of them here in town. But perhaps those who have pigeon houses on their roofs do not seem to you to be justified in calling them [Greek: peristereonas] even though some of them represent an investment of more than one hundred thousand sesterces. I advise you to buy out one of them and learn how to pocket a profit here in town, before you build on a large scale in the country.”

Of turtle doves

VIII. “So much for that then,” said Axius. “Proceed, please, to the next subject, Merula.”

“For turtle doves,” said Merula, “in like manner a house should be constructed proportioned to the number you intend to feed, and this, like the pigeon house, I have described, should have a door and windows and fresh water and walls and a vaulted roof, but in place of breeding nests the mutules should be extended through the walls or poles set in them in regular order with hempen mats on them, the lowest rank being not more than three feet from the floor, the rest at intervals of nine inches, the top rank six inches from the vault, and of equal breadth as the mutule stands out from the wall. On these the doves are fed day and night. For food they are given dry wheat, usually a half modius for every one hundred and twenty doves. Every day the house should be cleaned out, that they may not be injured by the accumulation of manure, and because also it has its place in the economy of the farm. The best time for fattening doves is about the harvest, for then the mothers are in

their best condition and produce young ones not only in the largest number but the best for cramming: so that is the time when they are most profitable.”

Of poultry

IX. “Tell me now, if you please, Merula,” said Axius, “what I should know of raising and fattening poultry and wood pigeons, then we can proceed to the discussion of the remainder of our programme.”

“There are three kinds of fowls usually classed as poultry,” replied Merula, “dunghill fowl, jungle fowl and guinea fowl. The dunghill fowl are those which are constantly kept in the country at farms.

“He who wishes to establish an [Greek: ornithoboskeion] from which, by the exercise of intelligence and care, he can take large profits, as the people of Delos do with such great success,¹³⁹ should observe five principal rules: 1 in regard to buying, what kind and how many he will keep: 2 in regard to breeding: 3 in regard to eggs, how they are set and hatched: 4 in regard to chicks, how and by whom they are reared, and 5°, which is a supplement of all the foregoing, how they are fattened.

“The females of the dunghill fowl are called hens, the breeding males cocks, and the males which have been altered capons. Cocks are caponized by burning the spurs¹⁴⁰ with a hot iron until the skin is broken, the wound being poulticed with potters’ clay.

“He who wishes to have a model [Greek: ornithoboskeion] should equip it with all three kinds of fowls, though chiefly the dunghill variety. In purchasing these last it is important to choose fertile hens, which are indicated by red feathers, black wings, unequal toes, large heads, combs upstanding and heavy, for such hens are more likely to lay.

“A lusty cock may be known by his muscular carriage, his red comb, a beak short, strong and sharp, eyes tawny or black, wattles a whitish red, neck spotted or tinged with gold, the second joint of his legs well covered with feathers, short legs long spurs, a heavy tail, and profuse feathers, also by his spirit and his frequent crowing, his readiness to fight, and that he is not only not afraid of such animals as do the hens harm, but even goes out to fight them. You must be careful, however, not to buy for breeding any fowls of the breeds known as Tanagran, Medean and Chalcidean, for, while they are beautiful to look at and are fit for fighting with one another, they are practically sterile.

“If you wish to keep a flock of two hundred, choose an enclosed place and there construct two large poultry houses side by side and looking to the East, each about ten by five feet and a little less than five feet in height, and furnished with windows three by four feet in which are fitted shutters of wickerwork, which will serve to let in plenty of fresh air and light and yet keep out such vermin as prey upon chickens.

“Between the two houses should be a door by which the *gallinarius* who takes care of them, may have access. Within the houses enough poles are arranged to serve as roosts for all the chickens: opposite each roost a nest

should be set in the wall. In front of the house should be an enclosed yard to which the fowls may have access in the day time and where they can dust themselves,¹⁴¹ and there should be constructed the keeper's house, which should be equipped all about with nests, either set into the walls or firmly fastened to them, for the least disturbance injures eggs when they are setting.

"When the hens begin to lay, straw should be spread in their nests and this should be renewed when they begin to set, for in such bedding are bred mites and other insects which will not suffer the hen to be quiet, with the result that the eggs are hatched unequally or rot.

"A hen should not be allowed to set on more than twenty-five eggs, although such is her fecundity that she lays more than that in a season. The best time for hatching is from the spring to the autumn equinox. Eggs laid before or after this season, or the first eggs laid by a pullet, should never be set. Hens used for setting should be old rather than young, without sharp beaks and claws, for those so equipped are better employed in laying than in setting. Hens a year or two years old are better fitted for laying.

"If you set pea-cock eggs under a hen, you should wait ten days before adding hen eggs to the nest, to insure them all hatching together, for the period of incubation of chicken eggs is thrice seven days and that of the eggs of pea-fowl is thrice nine. Sitting hens should be shut up day and night, except for a time in the morning and evening, when they are let out to eat and drink.

"The keeper should make the rounds every few days and turn the eggs, so that they may be kept warm all over. It is said that you can tell whether an egg is fertile or sterile by putting it in water: for if it is sterile it will float, while if it is fertile it will sink. Those who shake their eggs to ascertain this fact make a mistake for thereby they destroy the germ in them. It is also said that you can tell a sterile egg by the fact that it is transparent when held against the light.

"To preserve eggs they should be rubbed with fine salt or soaked for three or four hours in brine, and then cleaned off or packed in chaff or straw. Care should be taken to set eggs only in uneven numbers. The keeper can tell whether an egg is fertile or not four days after it is set, by holding it to the light, when he should throw it out if it is found to be empty and substitute another for it.

"The new hatched chickens should be taken from every nest and given to a hen who has only a few to care for. When in this way a setting hen has less than half her eggs left unhatched, they should be taken from her and put under another hen which has eggs still unhatched. It is not well to give more than thirty chicks to a hen. Chicks should be fed for the first fifteen days in the dust to protect them from injuring their tender beaks on the hard ground: their diet being crushed barley mixed with cress seed and soaked in wine, for prepared in this way the grain is digestible. They should be kept away from water in the beginning. When they begin to have feathers on their legs the mites should be carefully picked off their heads and necks, for these banes often destroy them.

Deer's horn should be burnt around their coops to keep snakes away, for the very smell of those vermin is fatal to young chickens. They should be allowed to run in the sun and to scratch in a dung heap, which serves to develop them. This rule applies not only to young chickens but also to the entire [Greek: ornithoboskeion], and should be practised all summer and even in winter on mild and sunny days. A net should be stretched over the chicken yard to keep the fowls themselves from flying out and to protect them from hawks and other birds of prey. Fowls should be protected from heat as well as cold, for both are harmful to them. When the chicks have got their feathers it is best to accustom them to follow one or two hens, leaving the other hens free to go to laying, in which occupation they are more useful than in rearing chicks.

"A hen should be set after the new moon, for those which begin earlier seldom hatch many chicks.

"They hatch usually in twenty days.

"And now since I have discussed the dunghill fowl at some length, I will make up to you by brevity with respect to the other kinds of fowls.

"Jungle fowl are rarely seen at Rome, and then usually in cages. They resemble guinea chickens more than dunghill fowls. When perfect in form and appearance they are often carried in the public processions with parrots and white blackbirds and other such rarities. They do not usually lay or raise their chickens on a farm, but in the forests. The island of Gallinaria, which lies in the Tuscan sea off the coast of Italy, opposite the Ligurian mountains (and the towns of Intermelii and Alba Ingannua) derives its name from them, though some maintain that the name comes from dunghill fowl which were carried to that island by sailors and have there run wild. Guinea fowl (*gallinae africanae*) are large, mottled and have their humps in their backs. The Greeks call them [Greek: meleagris].¹⁴² They are the last fowls which the culinary art has introduced to our dining tables, on account of their gamy flavour.¹⁴³ By reason of their rarity they sell for a high price.

"Of the three kinds of fowls, the ordinary dunghill fowl is used chiefly for cramming. For this purpose they are shut up in a small confined and darkened coop, because both exercise and light are enemies of fat. Any large chickens may be selected for this operation, not necessarily of that breed which the peasants call Melica incorrectly, for as the ancients said Thelis when they meant Thetis, so the country people still say Melica for Medica. This name was given at first to the fowls which were imported from Medea on account of their great size and then to all of that breed, but now the name is given indiscriminately to all large fowls by reason of their general resemblance. After the feathers have been pulled from their tails and wings they are crammed with balls of barley paste, with which may be mixed darnel meal, or flax seed soaked in soft water. They are fed twice a day but care must be taken to see that the last meal is digested before another is put before them. After they have been fed and their heads have been cleaned of mites, they are shut up again. This process is kept up for twenty-five days, when they will be fat.

“Some cram them on wheat bread soaked in water, or even in wine of good flavour and bouquet, claiming that they are thereby made fat and tender in twenty days.¹⁴⁴

“If in the process of cramming the fowls lose their appetite from too much food, the ration should be reduced daily during the last ten days in the same proportion as it was increased during the first ten days, so that the ration will be the same on the twentieth as on the first day.

“Wood pigeons are crammed and fattened in the same way.”

Of geese

X. “Let us now pass,” said Axius, “to that tribe which cannot live in the barn yard all the time, or even on land, but requires access to ponds. I mean those whom you philhellenes call amphibia. I understand that you call the places in which geese are kept by the Greek name [Greek: chaenoboskeion], and that Scipio Metellus and M. Seius have several large flocks of geese.”

“It is Seius’ practice,” said Merula, “to maintain his flocks of geese¹⁴⁵ in accordance with the five rules I have laid down for poultry, namely: with respect to choice of individuals, breeding, eggs, goslings and the process of cramming.

“On the first point he requires the slave who buys his geese to select them of good size and of white plumage, because they reproduce their own qualities in their goslings. This is necessary for there is another kind of geese of variegated plumage, which are called wild, and do not flock freely with the other kind and are domesticated with difficulty.

“The best time for breeding geese is at the end of winter and for laying and hatching from the beginning of February or March until the summer solstice. They breed usually in the water, diving to the bottom of the stream or pond.¹⁴⁶ A goose lays only three times a year: and each one should be furnished with a coop about two and a half feet square and bedded with straw: each of their eggs should be marked for identification, for they will not hatch any eggs but their own. They are usually set on nine or eleven eggs, never more than fifteen, nor less than five. In cold weather they set for thirty days, in warm weather twenty-five. When they are hatched the goslings are suffered to remain with their mother for five days, and then daily, when the weather is fine, they are driven out to the meadows or to the ponds or some swampy place. The gosling houses may be built either above or below ground, but never more than twenty should be housed together and care must be taken lest the floor be damp and that they are bedded on chaff or some thing of that kind, and that the house is so constructed as to keep out weasels and other beasts which prey on goslings. Geese are fed in wet places and it is the practice to sow especially for their food supply, using for this purpose any kind of grain, but particularly that salad plant called endive¹⁴⁷ which keeps green wherever there is water, freshening at the mere contact of water however dry it may be. This is gathered to be fed to them, for if they have access to the place where it is growing they will destroy the plant by

trampling on it, or else kill themselves by eating too much of it, for they are greedy by nature. For this reason they must be watched, as often in feeding their greediness leads them to seize a root and to break their own necks in attempting to pull it from the ground: for the neck is weak, as the head is soft.

“If there is none of this plant they should be fed barley or some other grain. When the farrago season is on, feed that to them, but in the same manner as I have described in respect of endive. While they are setting they may be fed ground barley soaked in water. The goslings may be fed for the first two days on barley cake (*pollenta*) or raw barley, and for the next three days fresh water cress chopped fine in a dish. When they are of an age to be kept by themselves in flocks of twenty, in the kind of house I have described, they are fed on barley meal or farrago or some kind of young herbage cut up.

“For cramming, goslings are picked out when they are about six months old, and are shut up in the fattening pen and there are fed three times a day as much as they will eat, of crushed barley and flour dust mixed with water, and after meals they should be made to drink copiously. Kept on this diet they will be fat in about two months.¹⁴⁸ After every meal the feeding place must be cleaned, for, while geese like a clean place, they never leave any place clean in which they have been.”

Of ducks

XI. “Whoever wishes to keep a flock of ducks and to establish a [Greek: *naessotropheion*], should choose for it, above all others if it is possible, a swampy location because that is most agreeable to the ducks, but, if not, then a situation sloping to a natural lake or pool, or to an artificial pond, with steps leading down to it, practicable for the ducks. The enclosure where they are kept should have a wall fifteen feet high, such as you saw at Seius’ villa, with only one door opening into it. All around the wall on the inside should run a broad platform on which are built against the wall the duck houses, fronting on a level concrete vestibule in which is constructed a permanent channel in which their food can be placed in water, for ducks are fed in that way. The entire wall should be given a smooth coating of stucco to keep out polecats¹⁴⁹ and other animals of prey, and the enclosure should be covered with a net of large mesh to prevent eagles from pouncing in and the ducks themselves from flying out.¹⁵⁰

“For food they are given wheat, barley, grape marc, and some times even lobsters and other such aquatic animals. The pond in the enclosure should be fed with a large head of water so that it may be kept always fresh.

“There are other kinds of similar birds, like teals and coots which may be fed in the same way.

“Some even keep partridges, which, as Archelaus writes, conceive when they hear the voice of the male bird. By reason of the natural abundance and the delicacy of their flesh, these last are not crammed like those domestic fowls I have described, but they are fattened by feeding in the ordinary way.

“And now, as I think that I have completed the first act of the drama of the

barn yard, I am done.”

Of rabbits

XII. At this point Appius returned and, after an exchange of questions and answers as to what had been said and done during his absence, he said: “Here beginneth the second act of those industries which are wont to be practised at a villa, namely of those enclosures which are still known as *leporaria* from their ancient special designation. Today a warren no longer means an acre or two in which hares are kept, but some times forests of vast extent in which troops of red deer and roe deer are enclosed. Q. Fulvius Lippinus is said to have forty jugera enclosed in the neighbourhood of Tarquinii¹⁵¹ where he keeps not only those animals I have named but wild sheep as well. Parks of still larger extent are found in the territory of Statonia (in Etruria) and in certain other places: indeed, in transalpine Gaul T. Pompeius has so great a game preserve that the enclosure is about four miles in extent.¹⁵²

“It is the practice to keep in such enclosures not only the animals I have named, but also snail houses and bee hives and jars in which dormice are fed, but the care and the increase and the feeding of all these things are easy, except in the case of bees. Who does not know that a *leporarium* should be enclosed with masonry walls which are at once smooth and high the one to keep out wild cats and badgers and other such beasts: the other to prevent wolves from getting over. Within should be coverts where the hares may lurk in the day time under bushes and grass, and trees with broad spreading branches to ward off the attacks of the eagle.

“Who does not know also that if he introduces only a few hares of both sexes in a short time the place will be full of them, for such is the fecundity of this quadruped that two pair are enough to stock an entire warren in a short time. Often a mother who has just had her litter is found to be big with another: indeed, Archelaus says that if you want to know how old a hare is you have only to count the number of openings in her belly, for without doubt there is one for every year of her life.

“It has recently become the practice to cram hares as well as poultry, and for this purpose they are taken out of the warren and shut up in small hutches where they are fattened. There are three kinds of hares: the first, our common Italian kind, which has short front legs and long hind legs, the upper part of the body dark coloured, the belly white, and long ears. Some say that our hare conceives a second time while it is still big. In transalpine Gaul and Macedonia they grow to a great size, but in Spain and in Italy they are not so large. The second kind is native in Gaul near the Alps, and is white all over the body: these are brought to Rome, but rarely. The third kind is native in Spain and is like our hare in every way except that it is smaller and is called rabbit (*cuniculus*).¹⁵³ L. Aelius thinks that the hare (*lepus*) gets his name from his swiftness, as it were that he is light of foot (*levipes*), but I think the name is derived from the ancient Greek, because the Aeolians of Boeotia call him [Greek: leporis]. The rabbits derive their latin name of *cuniculi* from the habit

of making underground burrows to hide in [for *cuniculus* is a Spanish word for mine]. If possible you should have all these three kinds in your warren. I am sure you already have the first two kinds,” Apius added, turning to me, “and, as you were so many years in Spain doubtless some rabbits followed you home.”“

Of game preserves

XIII. Then addressing himself again to Axius, Appius continued:

“You know, of course, that wild boars are kept in game parks, and that those which are brought in wild are fattened with as little trouble as the tame ones which are born in the park, for you have doubtless seen at the farm near Tusculum, which Varro here bought from M. Pupius Piso, wild boars and roe bucks assemble at the sound of the trumpet to be fed at regular hours, when from a platform, the keeper scatters mast to the wild boars and vetch or some such forage to the roe bucks.”

“I saw this done,” put in Axius, “more dramatically when I was a visitor at the villa of Q. Hortensius in the country near Laurentum. He has there a wood of more than fifty jugera in extent, all enclosed, but it might better be called a [Greek: *theriotropheion*] than a warren; there on high ground he caused his dinner table to be spread, and while we supped Hortensius gave orders that Orpheus be summoned: when he came, arrayed in his long robe, with a cithara in his hands, he was desired to sing. At that moment a trumpet was sounded and at once Orpheus was surrounded by a large audience of deer and wild boars and other quadrupeds: it seemed to be not less agreeable a spectacle than the shows of game, without African beasts, which the Aediles provide in the Circus Maximus.”

Of snails

XIV. And turning to Merula, Axius continued: “Appius has lightened your task, my dear Merula, so far as concerns the matter of game, and briefly the second act of our drama may be brought to an end, for I do not seek to learn any thing about snails and dormice, which is all that is left on the programme, for there can be no great trouble in keeping them.”

“It is not so simple as you seem to think, my dear Axius,” replied Merula, “for a place suitable for keeping snails¹⁵⁴ I must be not only in the open air but entirely surrounded by water, otherwise you will be kept running not only after the children but also the parents which you have supplied for breeding.”

“In other words,” said I, “they must be enclosed by water to save the maintenance of a slave catcher.”

“A place which is not baked by the sun and on which the dew remains is preferable,” continued Merula. “If the place you use for your snails is not supplied with dew naturally, as often is the case in sunny situations, and there is no available shady recess, such as is found under rocks or hills whose feet are laved by a lake or a stream, then you must supply dew artificially. This may be done by leading into the snailery a pipe on the end of which is fixed a rose nozzle, through which water is forced against a rock so that it scatters in

spray. The problem of feeding snails is small, for they supply themselves without help, finding what they require as they creep over the level ground and also while clinging to the sides of a wall, if no running water prevents their access to it. On the hucksters' stands they keep alive a long time, as it were chewing their own cud, all that is done for them being to supply a few laurel leaves and scatter a little bran over them: so a cook never knows whether he is cooking them alive or dead.

"There are many kinds of snails, such as the small white ones, which come from Reate: the large variety which are imported from Illyricum, and the medium size which come from Africa: but they vary in size in certain localities of each of those countries. Thus, there is found in Africa a variety which are called *solitannae* of so great size that their shells will hold ten quarts:¹⁵⁵ and so in the other countries I have named they are found together of all sizes. They produce an innumerable progeny, which at first are very small and soft but develop their hard shell with time. If you have large islands in the enclosure you may expect a rich haul from your snails.

"Snails are fattened by placing them in a jar smeared with boiled must and corn meal, on which they feed, and pierced with holes to admit the air, but they are naturally hardy."

Of dormice

XV. "Dormice¹⁵⁶ are preserved on a different system than snails, for while the one is confined by barriers of water, the other is kept in by a wall which must be coated on the inside with smooth stone or stucco to prevent their escape. Young nut trees should be planted in the enclosure, and when these are not bearing, mast and chestnuts should be thrown in to the dormice, for that is what makes them fat. Roomy cages should be provided for them in which to rear their young.¹⁵⁷ Little water is necessary, for dormice do not require much water, but on the contrary affect dry places. They are fattened in jars which are usually kept indoors. The potters make these jars in different shapes, but with paths for the dormice to use contrived on the sides and a hollow to hold their food, which consists of mast, walnuts and chestnuts.¹⁵⁸ Covers are placed on the jars and there in the dark the dormice are fattened."

Of bees

XVI. "It remains now," said Appius, "to rehearse the third and last act of our drama of the husbandry of the steading and to discuss the keeping of fishes."

"The third, indeed," exclaimed Axius, "shall we deprive ourselves of honey because in your youth you never drank mead in your own house, such was your practice of frugality?"

"He speaks the truth," said Appius, to us, "for I was indeed left a poor orphan with two brothers and two sisters to provide for, and it was not until I had married one of them to Lucullus without portion and he had named me his heir that I began to drink mead in my own house and to supply it to my household: but there never was a day when I did not offer it to all my guests.

But apart from that, it has been my fortune, not yours,¹⁵⁹ Axius, to have known these winged creatures whom nature has endowed so richly with industry and art, and that you may appreciate that I know more than you do of their almost incredible natural art, listen to what I am to say. It will then be for Merula to develop the practice of the bee keeper, or, as the Greeks call it, [Greek: melittourgia], as methodically as he has his other subjects.

“To begin then,¹⁶⁰ bees are generated partly by other bees and partly from the decaying carcase of an ox: so Archelaus in one of his epigrams calls them

‘flitting offspring of decaying beef,’

and else where he says,

‘wasps spring from horses, bees from calves.’

“Bees are not of a solitary habit like eagles, but are of a social nature, like men, a characteristic they share with daws, but not for the same reason, for bees live in colonies, the better to work and build, while daws congregate for gossip. Thus the life of a bee is one of intelligence and art, for man has learned from them to manufacture, to build, and to store his food: three occupations which are not the same but are diverse in their nature, for it is one thing to provide food, another to manufacture wax and honey, and still another to build a house. Has not each cell in a honey comb six sides, or as many as a bee has feet, the art of which arrangement appears in the teaching of the geometricians that of all polygons the hexagon covers the largest area within a circle.¹⁶¹ Bees feed out of doors, but it is at home that they manufacture that which is the sweetest of all things, acceptable to gods and men alike: for honey comb is offered on the altars and honey is served at the beginning of a dinner and again at dessert.

“Bees have institutions like our own, consisting of royalty, government and organized society. Cleanliness in all things is their aim: and so they never alight in any place where there is filth or an evil odour, or even where there is a strong savour of such an unguent as we may consider agreeable. For the same reason if one who approaches them is covered with perfume,¹⁶² they do not lick him as flies do, but they sting him, and by the same token no one ever sees bees crawling on meat and blood and grease, as flies do. And so they only settle in places of sweet savour. They do a minimum of damage because in their harvesting they leave what they touch none the worse.¹⁶³ They are not so cowardly as not to resist who ever attempts to disturb them, and yet they are fully conscious of their own weakness. They are called the Winged Servants of the Muses, because when they swarm they are quickly brought together by the music of cymbals and the clapping of hands: and as men assign Helicon and Olympus to be the haunts of the Muses, so nature has attributed the flowery and uncultivated mountains to the bees. They follow their king¹⁶⁴ wheresoever he goes, supporting him when he is tired and even taking him upon their backs if he is unable to fly, so do they wish to serve him.¹⁶⁵ As they are not idlers themselves, so do they hate those who are, and thus driving out the drones, they exclude them from the hive, because they are

of no service but merely consume honey: and it happens that a few bees, buzzing with wrath, will drive out a number of drones.

“They smear every thing about the entrance to the hive with a gum which is found between the cells which the Greeks call [Greek: erithakae]. They live under the discipline of an army, taking turns in resting and all doing their equal share of work, and they send out colonies and carry out the orders of their leaders, given with the voice, but as it were with a trumpet: and in like manner they have signs of peace and of war.

“But, Merula, now in my course I pass on the torch to you, as our Axius here is doubtless languishing while he has listened to all this natural history, for I have said nothing of profit.”

“I do not know,” said Merula, “whether what I can say on the subject of the profit to be derived from bees will satisfy you, Axius, but I have as my authorities not only Seius, who takes five thousand pounds of honey every year from the hives he leases,¹⁶⁶ but also our friend Varro here, for I have heard him tell of two brothers Veiani, from the Falerian territory, whom he had under his command in Spain and who, although their father left them only a small house with a curtilage of not exceeding a jugerum in extent, nevertheless made themselves rich. They set bee hives all about the house and planted part of the land in a garden and filled up the rest with thyme and clover and that bee plant known to us as *apiastrum*, though some call it [Greek: meliphullon], others [Greek: mellissophullon] and still others *melittaena*: and by this means they were wont to derive, as they estimated, an average income of not less than ten thousand sesterces per annum from honey; but they did this by being willing to wait until they could sell at their own time and price rather than by forcing the market.”

“Tell me,” exclaimed Axius, “where and how I should establish a bee-stand to make such a handsome profit.”

“The apiary,” replied Merula, “which some call by the Greek names [Greek: melitton] and [Greek: melittotropheion], and others *mellarium*, should preferably be placed near the house¹⁶⁷ in a location where there is no echo (for such sounds are deemed to put them to flight, as timid men are by the din of a battle) and where the temperature is mild, exposed neither to the heat of summer nor the cold of winter, giving preferably to the Southeast and near of access to places where their food is abundant and there is a supply of fresh water. If there is no natural supply of food available you should plant such things as best serve bees for pasture, namely: roses, thyme, bee balm,¹⁶⁸ poppies, beans, lentils, peas, basil, gladiolus, alfalfa, and especially clover which is of great service to the bees which are sick, for it begins to bloom at the vernal equinox and lasts until that of autumn. As clover is the best food for sick bees, so thyme is the best for making honey, and it is because Sicily abounds in good thyme that it takes the palm for producing honey. On this account some men bruise thyme in a mortar and mix warm water with it and then spray all their nursery plants with it for the sake of the bees.

“The hives should be set as near the house as convenient: some men even put them under the very portico for greater safety. Hives are made in various shapes and sizes and of different material;¹⁶⁹ thus some make them round out of wicker work: others of frame covered with bark: others use hollow tree trunks: others vessels of pottery: some even build them square out of rods, allowing about three feet in length and a foot in height, but these dimensions should be reduced where you have not enough bees to fill a hive of that size, for fear that the bees might become discouraged by too large an empty space.

“The bee hive derives its name *alvus*, which is the same as our word for belly, from the fact that it holds food, that is to say, honey; and it is on this analogy that hives are usually shaped to imitate the form of the belly, small in the waist and bulging out below. When the hives are made of wicker work they should be coated evenly within and without with ox dung¹⁷⁰ so that the bees may not be driven away by the roughness of their roof. The hives should be so ordered under the shelter of a wall that they may not be disturbed nor touch one another when arranged in ranks, for it is the practice to place hives in two and some times three separated ranks, but the opinion is that it is better to reduce the ranks to two than to increase them to four. In the middle of the hive small openings are made on the right and the left to serve as entrances for the bees, and on top is placed a practicable cover, which may be removed to give access to the honey comb. This is best when made of bark, and worst of pottery, because that is strongly affected both by the cold of winter and the heat of summer. In spring and summer the bee keeper should inspect each hive at least three times a month, fumigating them lightly, cleaning and throwing out dirt and worms. At the same time he should take precautions to keep down the number of princes, for they keep the bees from work by stirring up sedition. There are said to be three kinds of royalties among the bees: the black, the red and the mottled, or, as Menecrates writes, two: the black and the mottled: and as the latter is the better it behooves the bee keeper, when he finds both kinds in a hive, to kill the black one, as he is forever playing politics¹⁷¹ against the other king, whereby the hive must suffer, for inevitably one of the kings will flee or be driven out, in either case taking his party with him.

“Of working bees the small round mottled variety is considered the best. The drone, or, as some call him, the thief,¹⁷² is black with a large belly. The wasp, which has some resemblance to a bee, is not, however, a fellow labourer, but attacks the bees with his sting, wherefore the bees keep him at a distance.

“Bees are themselves distinguished as wild and tame. I call those wild which feed in the forests, and those tame which feed in cultivated places. The forest bees are smaller in size and hairy but better workmen.

“In buying bees it behooves the purchaser to see whether they are well or ailing. The signs of health are a thick swarm, well groomed appearance and a hive being filled in a workmanlike manner. The signs of lack of condition on

the other hand are a hairy and bristling appearance and a dusty coat, unless this last is caused by a pressure of work, for under such circumstances they often wear themselves down and become thin.

“If the hives are to be transferred from one place to another it is necessary to choose a fit time to make the move and a suitable place to receive them. As to time, spring is preferable to winter because in winter they have difficulty in adjusting themselves to a new location and so often run away, as they do also if you move them from a good location to a place where proper pasture is not available. Nor is a transfer from one hive to another in the same place to be undertaken carelessly, but that to which the bees are to be transferred should be rubbed with bee balm, which will serve as a bait for them, and some pieces of honey comb should be placed in it, not far from the entrances, for fear that the bees might run away if they found the larder of their new home empty.

“Menecrates says that bees contract a malady of the bowels from their first spring pasture on the blossoms of the almond and the cornel cherry and are cured by giving them urine to drink.¹⁷³

“That gummy substance which the bees use, chiefly in summer to construct a sort of curtain between the entrance and the hive, is called *propolis*, and by the same name is used by physicians in making plasters: by reason of which use it sells in the Via Sacra for more than honey itself. That substance which is called *erithacen*, and is used to glue the cells together, is different from both honey and *propolis*: it is supposed to have a quality of attraction for bees and is accordingly mixed with bee balm and smeared on the branch or other place on which it is desired to have a swarm light. The comb is made of wax and is multicellular, each cell in it having six sides or as many as nature has given the bee feet. It is said that bees do not gather from the same plants all the materials which enter in these four substances which they manufacture, namely: propolis, erithacen, wax and honey. Thus from the pomegranate and the asparagus they gather food alone, wax from the olive tree, honey from the fig, but not of good quality: other plants like the bean, the bee balm, the gourd and the cabbage serve a double purpose and yield both wax and food: while the apple and the wild pear serve a similar double purpose but for food and honey and the poppy again for wax and honey.

“Others again provide material for three purposes, food, honey and wax, such as the almond and the charlock.¹⁷⁴ In like manner there are flowers from each of which they derive a different one of these substances, and others from which they derive several of them: while they make distinctions in respect of plants according to the quality of the product they yield, — or rather the plants make the distinction for them — as with respect to honey, some yield liquid honey, like the skirwort,¹⁷⁵ and others thick honey like the rosemary. So again honey of insipid flavour is made from the fig, good honey from clover, and the best of all from thyme.

“And since drink is part of a bee’s diet and water is the liquid they use, there should be provided near the stand a place for them to drink, which may

be either a running stream or a reservoir not more than two or three fingers deep in which bricks or stones are placed in such a way as to project a little from the water, and so furnish a place for the bees to sit and drink; but the greatest care must be taken to keep this water fresh, as it is of high importance to the making of good honey.

“As the bees cannot go out to distant pasture in all weathers, food must be prepared for them, as otherwise they will live on their supply of honey and so deplete the store in the hive. For this purpose ten pounds of ripe figs may be boiled in six congii of water and bits of the paste thus prepared should be set out near the hives. Others provide honey water in little dishes and float flocks of clean wool on them through which the bees may suck without risk of either getting more than is good for them or of being drowned. One such dish should be provided for each hive and they should be kept filled. Others again bray dried grapes and figs together and, mixing in some boiled must, make a paste of which bits are exposed near the hives during such part of the winter as the bees are still able to go forth in search of food.

“When a swarm is about to come out of the hive (which happens when a number of young bees have matured, and the hive determines to send their youth out to found a colony, as formerly the Sabines often were compelled to do on account of the number of their children)¹⁷⁶ there are two signs by which the intention may be known: one that for several days before hand, and especially in the evening, many bees weave themselves together and hang upon the entrance of the hive like grapes: the other that when they are about to go forth or have already begun to go they buzz together lustily, as soldiers do when they break camp. Those who have come forth first fly about the hive waiting for the others, who have not yet collected, to join them. When the bee keeper notices this he has only to throw dust on them and at the same time beat upon some copper vessel to collect them, thoroughly frightened, where he desires in some nearby place on which he has smeared erithacen and bees’ balm and other things in which they delight. When they have settled down he should place near them a hive smeared within with the same baits, and then, by blowing a light smoke around them, compel them to enter the hive. When thus introduced into their new abode the swarm makes itself at home cheerfully, so that even if placed next to the parent hive they will prefer their new colonial settlement.

“And now, having told you all I know about the care of bees, I will speak of that for which the industry is carried on, that is to say, of the profit.

“The honey is taken off when the hive is full, as may be determined by removing the cover of the hive, for if the openings of the combs are seen to be sealed, as it were with a skin, then the hive is full of honey: but the bees themselves give notice of this condition by keeping up a loud buzzing within, by their agitation when they go in and out and by driving out the drones.

“In taking off honey some say that you should be content with nine parts, leaving the tenth, because if you take it all the bees will desert the hive: others

leave a still larger proportion than I have mentioned.

“As those who crop their corn land every year obtain good yields only at intervals, so it is with bee hives: you will have more industrious and more profitable bees if you do not exact of them the same tribute every year.

“It is considered that honey should be taken off for the first time at the rising of the Pleiades, for the second time at the end of summer before Arcturus has reached the zenith, and for the third time after the setting of the Pleiades, but this last time beware not to take more than one-third of the store even if the hive is full, leaving the other two-thirds for the winter supply, but if the hive is only partially filled nothing should be taken off. In any event, when a large amount of honey is to be taken off a hive it should not be done all at once or ostentatiously lest the bees be discouraged. Those combs which, on being taken off, are found to be partly unfilled with honey or to be soiled, should be pared with a knife.

“Care must be taken that the weaker bees in a hive are not oppressed by the stronger, for this diminishes the profit: to this end the minority party¹⁷⁷ may be colonized under another king. When bees are given to fighting with one another, you should sprinkle them with honey water, upon which they will not only cease fighting but will crowd together and kiss one another: and this will prove the case even more if they are sprinkled with mead, for the savour of the wine in it will cause them to apply themselves so greedily that they will fuddle themselves in sucking it. If the bees seem lazy about coming out to work and any part of them get the habit of remaining in the hive, they should be fumigated and odoriferous herbs, like bees’ balm and thyme, should be placed near the hive. Watchful care is necessary to protect them from ruin by heat or cold. If the bees are overtaken by a sudden rain or cold while at pasture (which rarely happens for they usually foresee such things) and are stricken down by the heavy rain drops and laid low and stunned, you should gather them in a dish and place them under cover in a warm place until the weather has cleared, when they should be sprinkled with ashes of fig wood (making sure that the ashes are rather hot than warm) the dish should then be shaken gently without touching the bees with your hand, and placed in the sun. When the bees feel this warmth they revive and get on their feet again, just as flies do after they have been apparently drowned. This should be done near the hive so that when the bees have come to themselves they may return home and to work.”

Of fish ponds

XVII. Here Pavo returned and said: “You may weigh anchor now if you wish. The drawing of the lots of the tribes to determine a tie vote is over and the herald is announcing the result of the election.”

Appius arose without delay and went to congratulate his candidate, and escort him home.

Merula said: “I will leave the third act of our drama of the husbandry of the steading to you, Axius,” and went out with the others, leaving Axius with me

to wait for our candidate whom we knew would come to join us. Axius said to me: "I do not regret Merula's departure at this point, for I am quite well up on the subject of fish ponds, which still remains to complete our programme.

"There are two kinds of fish ponds, of fresh water and salt water. The former are commonly maintained by farmers and without much expense, for the Lymphae, the homely goddesses of the Fountains, supply the water for them, while the latter, the sea ponds, are the play things of our nobles and are furnished with both water and fishes, as it were by Neptune himself: serving more the purposes of pleasure than of utility, their accomplishment being rather to empty than to fill the exchequers of their lords. For in the first place they are built at great expense, then they are stocked at great expense, and finally they are maintained at great expense.

"Hirrus was wont to derive an income of twelve thousand sesterces from the buildings surrounding his fish ponds, all of which he spent for food for his fishes: and no wonder, for I remember that on one occasion he lent two thousand *murenæ* to Caesar¹⁷⁸ by weight (stipulating for their return in kind), so that his villa (which was not otherwise extraordinary) sold for four million sesterces on account of the stock of fish.

"In sooth, the inland ponds of our farmer folk may well be called *dulcis*, and those other *amara*.¹⁷⁹

"A single fish pond suffices us simple folk, but those amateurs must have a series of them linked together: for as Pausias and other painters of his school have boxes with as many compartments as they have different coloured wax, so must they fain have as many ponds as they have different varieties of fish.

"These fish are furthermore sacred, more sacred, indeed, than those fish which you, Varro, say you saw in Lydia, (at the same time that you saw the dancing isles)¹⁸⁰ which came to the shore, where the altar was erected for a sacrifice, in shoals at the sound of the Greek pipe, because no one ever ventured to molest them; so no cook has ever been known to have 'sauced' one of these fishes.¹⁸¹

"When our friend Hortensius had those fish ponds at Baulii, which represented so large an investment, he was wont to send to Puteoli to buy the fish he served on his table, as I have often seen when I was visiting him. And it was not enough that his fishes did not supply his table, but he was at pains to supply theirs, taking greater precautions lest his mullets (*mulli*) should go hungry than I do for my mules in Rosea, and it was not at less cost that he supplied meat and drink to his stock than I do to mine. For I raise my asses, which bring such fancy prices, at the cost of one servant, a little barley and the water which springs from my land, while Hortensius must needs maintain a fleet of fishermen to keep him supplied with small fry to feed to his fish, or, when the sea runs high and such deep sea forage is cut off by a storm, and it is not possible even to draw live bait ashore in a net, he is fain to buy in the market for the delectation of the denizens of his ponds the very salt fish which is the food of the people."

“Doubtless,” said I, “Hortensius would prefer to have you take the carriage mules out of his stable than one of his barbel mules from the fish pond.”

“Yes, indeed,” agreed Axius, “and he would rather have a sick slave drink cold water than that his beloved fish should be risked in that which is fresh. On the other hand, M. Lucullus was reputed to be so careless and neglectful of his fish ponds that he did not provide any suitable quarters for his fishes in hot weather, but permitted them to remain in ponds which were unhealthy with stagnant water: a practice very different from that of his brother L. Lucullus, who yielded nothing to Neptune himself in his care of his fishes, for he pierced a mountain at Naples, and so contrived that the sea water in his fish ponds should be renewed by the action of the tides. Furthermore, he has arranged that his beloved fishes may be driven into a cool place during the heat of the day, just as the Apulian shepherds do when they drive their flocks along the drift ways to the Sabine mountains: for so great was his ardour for the welfare of his fishes that he gave a commission to his architect to drive at his sole cost a tunnel from his fish ponds at Raise to the sea, and by throwing out a mole contrived that the tide should flow in and out of his fish ponds twice a day, from moon to moon, and so cool them off.”

At this moment, while we were talking, there was a sound of foot steps on the right and our candidate came into the *villa publica* arrayed in the broad purple of his new rank as an aedile. We went to meet him and, after congratulations, escorted him to the Capitol, whence he departed for his home and we to ours.

So there, my dear Pinnius, is the brief record of our discourse on the husbandry of the steading.

ENDNOTES.

¹ It is interesting that Varro has realized the hope, here expressed, that his wisdom might survive for the benefit of the “uttermost generations of men” chiefly in the case of this treatise on Husbandry among the many monuments of his industry and learning. Petrarch in his *Epistle to Varro* in that first delightful book of Letters to Dead Authors (*de rebus familiaribus* XXIV, 6) rehearses the loss of Varro’s books and, adapting the thought here expressed in the text, regrets for that reason that Varro cannot be included in that company of men “whom we love even after their death owing to the good and righteous deeds that live after them, men who mold our character by their teaching and comfort us by their example, when the rest of mankind offends both our eyes and our nostrils; men who, though they have gone hence to the common abode of all (as Plautus says in *Casina*), nevertheless continue to be of service to the living.” If Petrarch had been a farmer he might have saved some of his regret, for Varro is surely, by virtue of the *Rerum Rusticarum*, a member of the fellowship Petrarch describes.

² Varro was essentially an antiquary and it is amusing to observe that he is unable to suppress his learning even in his prayers. One is reminded of the anecdote of the New England minister, who, in the course of an unctuous prayer, proclaimed, with magisterial authority, “Paradoxical as it may appear, O Lord, it is nevertheless true, etc.”

³ Following Plato and Xenophon and Cicero, Varro cast his books into the form of dialogues to make them entertaining (“and what is the use of a book,” thought Alice in Wonderland, “without pictures or conversations.”); for the same reason he was careful about his local colour. Thus the scene of this first book, which relates to agriculture proper, is laid at Rome in the temple of Earth on the festival of the Seed Sowing, and the characters bear names of punning reference to the tilling of the soil. Varro was strong on puns, avowing (*Cicero Acad.* I, 2) that that form of humour made it easier for people of small intelligence to swallow his learning.

⁴ The story is that when Scipio captured Carthage he distributed the Punic libraries among the native allies, reserving only the agricultural works of Mago, which the Roman Senate subsequently ordered to be translated into Latin, so highly were they esteemed. Probably more real wealth was brought to Rome in the pages of these precious volumes than was represented by all the other plunder of Carthage. “The improving a kingdom in matter of husbandry is better than conquering a new kingdom,” says old Samuel Hartlib, Milton’s friend, in his *Legacie*. It is a curious fact that as the Romans derived agricultural wisdom from their ancient enemies, so did the English. Cf. Thorold Rogers’ *Six Centuries of Work and Wages*. “We owe the improvements in English agriculture to Holland. From this country we borrowed, at the beginning of the seventeenth century, the cultivation of winter roots, and, at that of the eighteenth, the artificial grasses. The Dutch had practised agriculture with the patient and minute industry of market gardeners. They had tried successfully to cultivate every thing to the uttermost, which could be used for human food, or could give innocent gratification to a refined taste. They taught agriculture and they taught gardening. They were the first people to surround their homesteads with flower beds, with groves, with trim parterres, with the finest turf, to improve fruit trees, to seek out and perfect edible roots and herbs at once for man and cattle. We owe to the Dutch that scurvy and leprosy have been banished from England, that continuous crops have taken the place of barren fallows, that the true rotation of crops has been discovered and perfected, that the population of these islands has been increased and that the cattle and sheep in England are ten times what they were in numbers and three times what they were in size and quality.”

⁵ The Roman proverb which Agrius had in mind reminds one of the witty French woman's comment upon the achievement of St. Denis in walking several miles to Montmartre, after his head had been cut off, (as all the world can still see him doing in the verrières of Notre Dame de Chartres): "en pareil cas, ce n'est que le premier pas qui coûte."

⁶ To this glowing description of agricultural Italy in the Augustan age may be annexed that of Machiavelli on the state of Tuscany in his youth: "Ridotta tutta in somma pace e tranquillità, coltivata non meno ne' luoghi più montuosi e più sterili che nelle pianure e regioni più fertili...." It is our privilege to see the image of this fruitful cultivation of the mountain tops not only in Machiavelli's prose, but on the walls of the Palazzo Riccardi in Gozzoli's *Journey of the Magi*, where, like King Robert of Sicily, the Magi crossed

"Into the lovely land of Italy
Whose loveliness was more resplendent made
By the mere passing of that cavalcade."

It seems almost a pity to contrast with these the comment of a careful and sympathetic student of the agricultural Italy of the age of King Umberto: "To return to the question of the natural richness of agricultural Italy," says Dr. W.N. Beauclerk in his *Rural Italy* (1888), "we may compare the words of the German ballad: 'In Italy macaroni ready cooked rains from the sky, and the vines are festooned with sausages,' with the words today rife throughout the Kingdom, 'Rural Italy is poor and miserable, and has no future in store for her.' The fact is that Italy is rich in capabilities of production, but exhausted in spontaneous fertility. Her vast forests have been cut down, giving place to sterile and malarious ground: the plains and shores formerly covered with wealthy and populous cities are now deserted marshes: Sardinia and other ancient granaries of the Roman Empire are empty and unproductive: two-thirds of the Kingdom are occupied by mountains impossible of cultivation, and the remainder is to a large extent ill-farmed and unremunerative. To call Italy the 'Garden of Europe' under these circumstances seems cruel irony."

⁷ As we may assume that the yields of wine of which Fundanius boasts were the largest of which Varro had information in the Italy of his time, it is interesting to compare them with the largest yields of the most productive wine country of France today. Fifteen cullei, or three hundred amphorae per jugerum, is the equivalent of 2700 gallons per acre: while according to P. Joigneaux, in the *Livre de la Ferme*, the largest yields in modern France are in the Midi (specifically Hérault), where in exceptional cases they amount to as much as 250 hectolitres to the hectare, or say 2672 gallons per acre. It may be noted that the yields of the best modern wines, like Burgundy, are less than half of this, and it is probable that the same was true of the *vinum Setinum* of Augustus, if not of the Horatian Massic.

⁸ The modern Italian opinion of farming in a fertile but unhealthy situation is expressed with a grim humour in the Tuscan proverb: "in Maremma s'arricchisce in un anno, si muore in sei mesi."

⁹ This is Keil's ingenious interpretation of an obscure passage. We may compare the English designation of a church yard as "God's acre." What Licinius Crassus actually did was, while haranguing from the rostra, to turn his back upon the Comitium, where the Senators gathered, and address himself directly to the people assembled in the Forum. The act was significant as indicating that the sovereignty had changed place.

¹⁰ Tremelius Scrofa was the author of a treatise on agriculture, which Columella cites, but which has not otherwise survived.

¹¹ “It was a received opinion amongst the antients that a large, busy, well peopled village, situated in a country thoroughly cultivated, was a more magnificent sight than the palaces of noblemen and princes in the midst of neglected lands.” Harte’s *Essays on Husbandry*, p. 11. This is a delightful book, the ripe product of a gentleman and a scholar. In the middle of the eighteenth century it advocated what we are still advocating — that agriculture, as the basis of national wealth, deserves the study and attention of the highest intelligence; specifically it proposed the introduction of new grasses and forage crops (alfalfa above all others) to enable the land to support more live stock. It was published in 1764, just after France had ceded to England by the Treaty of Paris all of her possessions in America east of the Mississippi River; and not the least interesting passages of Harte’s book are those proposing an agricultural development of the newly acquired territory between Lake Illinois (Michigan) and the Mississippi, which he suggests may be readily brought under cultivation with the aid of the buffaloes of the country. He shrewdly says: “Maize may be raised in this part of Canada to what quantity we please, for it grows there naturally in great abundance.” It happened, however, that a few years later, in 1778, Col. George Rogers Clark of Virginia made a certain expedition through the wilderness to the British outpost at Vincennes, which saved England the trouble of taking Harte’s advice, but that it has not been neglected may be evident from the fact that less than a century and a half later, or in 1910, the State of Illinois produced 415 million bushels of maize, besides twice as much oats and half as much wheat as did old England herself in the same year of grace.

Harte was the travelling governor of that young Mr. Stanhope, to whom my lord Chesterfield wrote his famous worldly wise letters. He was the author also of a *Life of Gustavus Adolphus*, which was a failure. Dr. Johnson, who liked Harte, said: “It was unlucky in coming out on the same day with Robertson’s *History of Scotland*. His *Husbandry*, however, is good.” (*Boswell*, IV, 91). With this judgment of Dr. Johnson there has been, and must be, general concurrence.

¹² Pliny records (H.N. XVIII, 7) that at Lucullus’ farm there was less ground for ploughing than of floor for sweeping.

¹³ Eggs were the first course, as apples were the last, at a Roman dinner, hence the saying “ab ovo usque ad mala.”

¹⁴ Cf. Gilbert Murray’s version of Euripides’ *Troades*, 799:

In Salamis, filled with the foaming
Of billows and murmur of bees,
Old Telamon stayed from his roaming,
Long ago, on a throne of the seas;
Looking out on the hills olive laden,
Enchanted, where first from the earth.
The gray-gleaming fruit of the Maiden
Athena had birth.

The physical reason why the olive flourished in Attica, as Theophrastus points out (C.P.V. II, 2), was because it craves a thin soil, and that of Attica, with its out-croppings of calcareous rock, suits the olive perfectly, while fit for little else agricultural.

¹⁵ In the *Geoponica* (XIII, 15) there has been preserved a remedy for a similar evil, which, in all fairness, should be credited to Saserna. In any event, it is what the newspapers used to call “important, if true,” viz: “If ever you come into a place where fleas abound, cry Och! Och! ([Greek: och, och) and they will not touch you.”]

¹⁶ The editor of an Iowa farm journal, who has been making a study of agricultural Europe, has recently reported an interesting comparison between the results of extensive farming as practised in Iowa and intensive farming as practised in Bavaria. He begins with the thesis that the object of agriculture is to put the energy of the sun's rays into forms which animals and human beings can use, and, reducing the crop production of each country to thermal units, he finds "that for every man, woman and child connected with farming in Iowa 14,200 therms of sun's energy were imprisoned, while for every man, woman and child connected with farming in Bavaria only 2,600 therms were stored up. In other words, the average Iowa farmer is six times as successful in his efforts to capture the power of the sun's rays as the average Bavarian farmer. On the other hand, the average acre of Iowa land is only about one-seventh as successful as the average acre of Bavarian land in supporting those who live on it. If we look on land as the unit, then the Bavarians get better results than we in Iowa, but if we look on human labor as the unit, then the Iowa farmers are far ahead of those of Bavaria."

It may be remarked that if the Iowa farmer, who gets his results by the use of machinery, was to adopt also the intensive practice of the Bavarian farmer, he would secure at once the greatest efficiency per acre and per man, and that is the true purpose of agriculture.

¹⁷ It is one of the charms of Varro's treatise that he always insists cheerfully on the pleasure to be derived from the land. It is the same spirit which Conington has remarked cropping out in many places in Virgil's *Georgics* — the joy of the husbandman in his work, as in the "iuvat" of

"iuvat Ismara Baccho Conserere, atque olea magnum vestire Taburnum."

This is the blessed "surcease of sorrow" of which the crowded life of the modern city knows nothing: but, as the practical Roman indicates, it will not support life of its own mere motion. Cf. Dr. Johnson's picture of Shenstone: "He began from this time to entangle his walks and to wind his waters: which he did with such judgment and such fancy as made his little domain the envy of the great and the admiration of the skillful. His house was mean, and he did not improve it: his care was of his grounds.... In time his expences brought clamours about him, that overpowered the lambs' bleat and the linnets' song; and his groves were haunted by beings very different from fawns and fairies."

¹⁸ Walter of Henley, in thirteenth century England, drove home a shrewd comment on the country gentleman who farms without keeping accounts and thinks he is engaged in a profitable industry. "You know surely," he says, "that an acre sown with wheat takes three ploughings, except lands which are sown yearly, and that one with another each ploughing is worth six pence, and harrowing a penny, and on the acre it is necessary to sow at least two bushels. Now two bushels at Michaelmas are worth at least twelve pence, and weeding a half penny and reaping five pence, and carrying in August a penny: the straw will pay for the threshing. At three times your sowing you ought to have six bushels, worth three shillings; and the cost amounts to three shillings and three half pence, and the ground is yours and not reckoned."

Of Walter of Henley little is known, but it is conjectured that he was the bailiff of the manors near Henley which belonged to the Abbey of Canterbury. His curious and valuable *Dite de Hosebondrie*, which is as original in its way as Cato's treatise, being entirely free from mere literary tradition, is now available to the modern reader in a translation, from the original barbarous English law French, by Elizabeth Lamond, made for the Royal Historical Society in 1890.

¹⁹ This was just before Pharsalia, and the army was that of Pompey which Varro had joined after surrendering to Caesar in Spain.

²⁰ In this enumeration of trees Varro does not include the chestnut which is now one of the features of the Italian mountain landscape and furnishes support for a considerable part of the Italian population, who subsist on *necci*, those indigestible chestnut flour cakes, just as the Irish peasants do on potatoes. The chestnut was late in getting a foothold in Italy but it was there in Varro's day. He mentions the nuts as part of the diet of dormice (III, 15).

By the thirteenth century chestnuts had become an established article of human food in Italy. Pietro Crescenzi (1230-1307) describes two varieties, the cultivated and the wild, and quotes the Arabian physician Avicenna to the effect that chestnuts are “di tarda digestionem ma di buono nuttimento.” It is perhaps for this very reason that chestnut bread is acceptable to those engaged in heavy labor. Fynes Moryson says in his *Itinerary* (1617) that maslin bread made of a mixture of rye and wheat flour was used by labourers in England because it “abode longer in the stomach and was not so soon digested with their labour.”

Crescenzi, who was a lawyer and a judge, says in his preface that he had left his native Bologna because of the civil strifes, had taken foreign service in several parts of Italy, and so had opportunity to see the world. He wrote his book on agriculture because, as he says, of all the things he learned on his travels there was nothing “piu a bondevole, niuna piu dolce, et niuna piu degna de l’huomo libero,” a sentiment which Socrates had expressed sixteen hundred years earlier and which was echoed six hundred years later by another far-sighted Italian, the statesman Cavour.

²¹ The white chalk which Scrofa saw used as manure in Transalpine Gaul, when he was serving in the army under Julius Caesar, was undoubtedly marl, the use of which in that region as in Britain was subsequently noted by Pliny (H.N. XVII, 4).

There were no deposits of marl in Italy, and so the Romans knew nothing of its use, from experience, but Pliny's treatment of the subject shows a sound source of information. In England, where several kinds of marl are found in quantities, its use was probably never discontinued after the Roman times. Walter of Henley discusses its use in the thirteenth century, and Sir Anthony Fitzherbert continues the discussion in the sixteenth century. In connection with the history of the use of marl in agriculture may be cited the tender tribute which Arthur Young recorded on the tombstone of his wife in Bradfield Church. The lady's chief virtue appears to have been, in the memory of her husband, that she was “the great-grand-daughter of John Allen, esq. of Lyng House in the County of Norfolk, the first person according to the Comte de Boulainvilliers, who there used marl.”

The Romans did not have the fight against sour land which is the heritage of the modern farmer after years of continuous application to his land of phosphoric and sulphuric acid in the form of mineral fertilizers. What sour land the Romans had they corrected with humus making barnyard manure, or the rich compost which Cato and Columella recommend. They had, however, a test for sourness of land which is still practised even where the convenient litmus paper is available. Virgil (*Georgic* II, 241) gives the formula: “Fill a basket with soil, and strain fresh water through it. The taste of water strained through sour soil will twist away the taster's face.”

²² This sounds like the boast of the modern proprietor of an old blue grass sod in Northern Virginia or Kentucky. On the general question of pasture vs. arable land, cf. Hartlib's *Legacie*: “It is a misfortune that pasture lands are not more improved. England abounds in pasturage more than any other country, and is, therefore, richer. In France, acre for acre, the land is not

comparable to ours: and, therefore, Fortescue, chancellor to Henry VI, observes that we get more in England by standing still (alluding to our meadows) than the French do by working (that is, cultivating their vineyards and corn lands).”

We may permit Montesquieu (*Esprit des Loix* II, 23, 14) to voice the French side of this question. “Les pais de pâturage sont pen peuplès. Les terres à bled occupent plus d’hommes et les vignobles infiniment d’avantage. En Angleterre on s’est souvent plaint que l’augmentation des pâturage diminuoit les habitants.”

In the introduction to his Book Two (*post*, p. 179) Varro states the sound conclusion, that the two kinds of husbandry should be combined on the same land. Sir Anthony Fitzherbert knew this: “An housbande can not well thryue by his corne without he haue other cattell, nor by his cattell without corne. For els he shall be a byer, a borrower or a beggar.”

²³ This is the explanation of why Aesop’s fox found the grapes to be sour which grew on a trellis, for he had expected to find them of easy access on the ground. Aesop was a Phrygian, and, while Bentley has proved that Aesop never wrote the existing fables which go by that name, yet it is recognized that they are of Oriental origin and it is evident that that of the Fox and the Grapes came out of Asia, where, as Varro says, the grapes were usually allowed to grow on the ground.

²⁴ One is tempted to include here Pliny’s observations upon the tests of good soil if only for the sake of his description of one of the sweetest sensations of the farmer every where, the aroma of new ploughed fertile land: —

“Those unguents which have a taste of earth are better,” says Cicero, “than those which smack of saffron,” it seeming to him more to the purpose to express himself by the word taste than smell. And such is the fact no doubt, that soil is the best which has the savour of a perfume. If the question should be put to us, what is this odour of the earth that is held in such estimation; our answer is that it is the same that is often to be recognized at the moment of sunset without the necessity even of turning up the ground, at the spots where the extremities of the rainbow have been observed to meet the earth: as also, when after long continued drought, the rain has soaked the ground. Then it is that the earth exhales the divine odour that is so peculiarly its own, and to which, imparted to it by the sun, there is no perfume however sweet that can possibly be compared. It is this odour which the earth, when turned up, ought to emit, and which, when once found, can never deceive any person: and this will be found the best criterion for judging of the quality of the soil. Such, too, is the odour that is usually perceived in land newly cleared when an ancient forest has been just cut down; its excellence is a thing that is universally admitted.

²⁵ The *actus* was the head land or as much land as a yoke of oxen could plough at a single spell without stopping, and measured 120 feet in length and four feet in width. Cf. Pliny, H.N. XVIII, 3. Hence the square of the head land became the basis of the Roman land measure. With the derivation of the *actus* may be compared that of the English furlong (furrow-long) and the French *arpent* (literally, head land).

²⁶ On the socialistic principle of Strepsiades in Aristophanes’ *Clouds* that the use of geometry is to divide the land into *equal* parts.

²⁷ As it is difficult to appreciate that the Roman Campagna was formerly populous with villas, when one contemplates its green solitudes today, so when one faces the dread malaria which there breeds, one wonders how the Romans of the Republic maintained so long their

hardy constitutions. It is now agreed that there was no malaria in the Land of Saturn so long as the volcanos in the Alban hills were active, because their gases purified the air and kept down the mosquitoes, and geology tells us that Monte Pila was in eruption for two or three centuries after the foundation of Rome. By the beginning of the second century B.C. the fever seems to have become endemic. Plautus and Terence both mention it and Cato (CLVII) describes its symptoms unmistakably. In his book on the effect of malaria in history, W.H. Jones expresses the opinion that the malady was brought into Italy from Africa by Hannibal's soldiers, but it is more probable that it was always there. See the discussion in Lanciani's *Wanderings in the Roman Campagna*. In Varro's time the Roman fever had begun to sap the vitality of the Roman people, and the "animalia minuta" in this passage suggests that Varro had a curious appreciation of what we call the modern science of the subject. Columella (I, 5, 6) indeed specifically mentions mosquitoes (infestis aculeis armata animalia) as one of the risks incident to living near a swamp.

²⁸ In the thirteenth century Ibn-al-Awam, a learned Moor, wrote at Seville his *Kitab al-felahah*, or Book of Agriculture, which has preserved for us not only the wisdom of the Moorish practice in agriculture and gardening which made Spain an enchanted paradise, but also the tradition of the Arabs in such matters, purporting to go back, through the Nabataeans to the Chaldaean books, which recorded the agricultural methods that obtained "by the waters of Babylon." Ibn-al-Awam's book has, therefore, a double interest for us, and we are fortunate in having it available in an admirable French translation from the Arabic by J.J. Clement-Mullet (Paris, Librairie A. Franck, 1864). Not the least profitable chapters in this book are those devoted to the preparation of manure in composts, to be ripened in pits as Varro advises in the text. They show a thoroughness, a care and an art in the mixing of the various animal dungs, with straw, woodsearh and cinders, which few modern gardeners could equal. German scholarship has questioned the Chaldaean origin of the authorities quoted, but there is internal evidence which smacks of an oriental despotism that might well be Babylonian. In a recipe for a rich compost suitable for small garden plants, we are advised (I, 2, I, p. 95), without a quiver, to mix in blood — that of the camel or the sheep if necessary — *but human blood is to be preferred!*

²⁹ What Varro describes as the military fence of ditch and bank was doubtless the typical Herefordshire fence of modern England which Arthur Young, in *The Farmers' Letters*, recommends so highly as at once most effective and most economical. The bank is topped with a plashed hedge of white thorn in which willow, ash, hazel and beech are planted for "firing." The fencing practice of the American farmer has followed the line of least resistance and is founded on the lowest first cost: the original "snake" fences of split rails, upon the making of which a former generation of pioneer American boys qualified themselves for Presidential campaigns, being followed by woven wire "made by a trust" and not the most enduring achievement of Big Business. The practical farmer, as well as the lover of rural scenery, has cause for regret that American agricultural practice has not yet had the patience to enclose the land within live hedges and ditches.

³⁰ The kind of fence which Varro here describes as "ex terra et lapillis compositis in formis" is also described by Pliny (H.N. XXXV, 169), as formaceos or moulded, and he adds, "aevius durant." It would thus clearly appear to have been of gravel concrete, the use of which the manufacturers of cement are now telling us, is the badge of the modern progressive farmer. Cato (XXXVIII) told how to burn lime on the farm, and these concrete fences were, of course, formed with lime as the matrix. When only a few years ago, Portland cement was first produced in America at a cost and in a quantity to stimulate the development of concrete construction, engineers began with rough broken stone and sand as the constituents of what they call the aggregate, but some one soon "discovered" that the use of smooth natural gravel

made more compact concrete and “gravel concrete” became the last word in engineering practice. But it was older even than Varro. A Chicago business man visiting Mycenae picked up and brought home a bit of rubbish from Schliemann’s excavations of the ancient masonry: lying on his office desk it attracted the attention of an engineering friend who exclaimed, “That is one of the best samples of the new gravel concrete I have seen. Did it come out of the Illinois tunnel?” “No,” replied the returned traveller, “it came out of the tomb of Agamemnon!”

³¹ Varro here seems to forget the unities. He speaks in his own person, when Scrofa has the floor.

³² It will be recalled that Aristotle described slaves as living tools. In Roman law a slave was not a *persona* but a *res*. Cf. Gaius II, 15.

³³ One of the most interesting of these freemen labourers of whom we know is that Ofellus whom Horace (Satire II, 2) tells us was working with cheerful philosophy as a hired hand upon his own ancestral property from which he had been turned out in the confiscations following the battle of Philippi. This might have been the fate of Virgil also had he not chanced to have powerful friends.

³⁴ “Mais lorsque, malgré le dégoût de la chaîne domestique, nous voyons naître entre les males et les femelles ces sentiments que la nature a partout fondés sur un libre choix: lorsque l’amour a commencé à unir ces couples captifs, alors leur esclavage, devenu pour eux aussi doux que la douce liberté, leur fait oublier peu à peu leur droits de franchise naturelle et les prérogatives de leur état sauvage; et ces lieux des premiers plaisirs, des premières amours, ces lieux si chers à tout être sensible, deviennent leur demeure de prédilection et leur habitation de choix: l’éducation de la famille rend encore cette affection plus profonde et la communique en même temps aux petits, qui s’étant trouvés citoyens par naissance d’un séjour adopté par leur parents, ne cherchent point à en changer: car ne pouvant avoir que pen ou point d’idée d’un état différent ni d’un autre séjour ils s’attachent au lieu ou ils sont nés comme à leur patrie; et l’on sait que la terre natale est chère a ceux même qui l’habitent en esclaves.”

One might assume that this eloquent and comfortable essay on contentment in slavery had been written to illustrate Varro’s text at this point, but, as a matter of fact, it is Buffon’s observation (VIII, 460) on the domestication of wild ducks!

³⁵ Saserna’s rule would be the equivalent of one hand to every five acres cultivated. With slave labour, certainly with negro slave labour, the experience of American cotton planters in the nineteenth century very nearly confirmed this requirement, but one of the economic advantages of the abolition of slavery is illustrated by this very point. In Latimer’s *First Sermon before King Edward VI*, animadverting on the advance in farm rents in his day, he says that his father, a typical substantial English yeoman of the time of the discovery of America, was able to employ profitably six labourers in cultivating 120 acres, or, say, one hand for each twenty acres, which was precisely what Arthur Young recommended as necessary for high farming at the end of the eighteenth century. At the beginning of the twentieth century the American farmer seldom employs more than one hand for every eighty acres cultivated, but this is partly due to the use of improved machinery and partly to the fact that his land is not thoroughly cultivated.

³⁶ This example of Roman cost accounting is matched by Walter of Henley in thirteenth century England.

“Some men will tell you that a plough cannot work eight score or nine score acres yearly, but I will show you that it can. You know well that a furlong ought to be forty perches long and four wide, and the King’s perch is sixteen feet and a half: then an acre is sixty-six feet in width. Now in ploughing go thirty-six times round to make the ridge narrower, and when the acre is ploughed then you have made seventy-two furlongs, which are six leagues, for be it known that twelve furlongs are a league. And the horse or ox must be very poor that cannot from the morning go easily in pace three leagues in length from his starting place and return by three o’clock. And I will show you by another reason that it can do as much. You know that there are in the year fifty-two weeks. Now take away eight weeks for holy days and other hindrances, then are there forty-four working weeks left. And in all that time the plough shall only have to plough for fallow or for spring or winter sowing three roods and a half daily, and for second fallowing an acre. Now see if a plough were properly kept and followed, if it could not do as much daily.”

³⁷ Stolo is quibbling. Cato’s unit of 240 jugera was based on the duodecimal system of weights and measures which the Romans had originally derived from Babylon but afterwards modified by the use of a decimal system. The enlightened and progressive nations of the modern world who have followed the Romans in adopting a decimal system may perhaps approve Stolo’s remarks, but it behooves those of us who still cling to the duodecimal system to defend Cato, if only to keep up our own courage.

³⁸ Here, in a few words, is the whole doctrine of intelligent agriculture. Cf. Donaldson’s *Agricultural Biography*, tit. Jethro Tull. “The name of Tull will ever descend to posterity as one of the greatest luminaries, if not the very greatest benefactor, that British agriculture has the pride to acknowledge. His example furnishes the vast advantages of educated men directing their attention to the cultivation of the soil, as they bring enlightened minds to bear upon its practice and look at the object in a naked point of view, being divested of the dogmas and trammels of the craft with which the practitioners of routine are inexpugnably provided and entrenched.”

³⁹ Pliny quotes Cato: “What ever can be done by the help of the ass costs the least money,” which is the philosophy of modern power machinery on the farm, as elsewhere. It is largely a question of the cost of fuel, as Varro says.

⁴⁰ Green manuring is one of the oldest, as it is one of the best, of agricultural practices. Long before Varro, Theophrastus (II.P. 9, I) had recorded what the agricultural colleges teach today — that beans are valuable for this purpose because they rot readily, and, he adds, in Macedonia and Thessaly it has always been the custom to turn them under when they bloom.

⁴¹ Although Varro advises the first ploughing in the spring, the ancients were not unmindful of the advantages of winter ploughing of stiff and heavy clay. Theophrastus, who died in B.C. 287, advises it “that the earth may feel the cold.” Indeed, he was fully alive to the reasons urged by the modern professors of agronomy for intensive cultivation. “For the soil,” he says (C.P. III, 25), “often inverted becomes free, light and clear of weeds, so that it can most easily afford nourishment.”

King Solomon gives the same advice, “The sluggard will not plough by reason of the winter, therefore shall he begin harvest and have nothing.” *Proverbs*, XX, 4.

⁴² The Romans understood the advantages of thorough cultivation of the soil. As appears from the text, they habitually broke up a sod in the spring, ploughed it again at midsummer, and once more in September before seeding. Pliny prescribes that the first ploughing should

be nine inches deep, and says that the Etruscans some times ploughed their stiff clay as many as nine times. The accepted Roman reason for this was the eradication of weeds, but it also accomplished in some measure the purpose of “dry farming” — the conservation of the moisture content of the soil, as that had been practised for countless generations in the sandy Valley of Mesopotamia. Varro makes no exception to this rule, but Virgil was here, as in other instances, induced to depart from Varro’s wisdom, with the result that he imposed upon Roman agriculture several thoroughly bad practices. Thus, while he applies Varro ploughing rules to rich land and bids the farmer “exercetque frequens tellurem atque imperat arvis,” he says (Geo. I, 62) that it will suffice to give sandy land a single shallow ploughing in September immediately before seeding, for fear, forsooth, that the summer suns will evaporate whatever moisture there is in it! Again, Virgil recommends, what Varro does not, cross-ploughing and burning the stubble and Virgil’s advice was generally followed.

In William Benson’s edition (1725) of the *Georgics* “with notes critical and rustick,” it is stated that “the husbandry of England in general is Virgilian, which is shown by paring and burning the surface: by raftering and cross-ploughing, and that in those parts of England where the Romans principally inhabited all along the Southern coast Latin words remain to this hour among shepherds and ploughmen in their rustick affairs: and what will seem more strange at first sight to affirm though in fact really true, there is more of Virgil’s husbandry put in practice in England at this instant than in Italy itself.” That this was the fact in the thirteenth century is clear from the quotations we have made from Walter of Henley’s *Dite de Hosebondrie*. Cf. also Sir Anthony Fitzherbert and the account of the manorial system of farming in England in Prothero’s *English Farming Past and Present*.

It remained for Jethro Tull of the *Horseshoeing Husbandry* to unloose in England the long spell of the magic of Virgil’s poetry upon practical agriculture.

⁴³ The Julian calendar, which took effect on January 1, B.C. 45, had been in use only eight years when Varro was writing.

⁴⁴ Schneider and others have attempted to emend the enumeration of the days in this succession of seasons, but Keil justly observes: “As we do not know what principle Varro followed in establishing these divisions of the year, it is safer to set them down as they are written in the codex than to be tempted by uncertain emendation.” I have accordingly followed Keil here.

⁴⁵ The practice of ridging land seeded to grain was necessary before the invention of the modern drill. Dickson, in his *Husbandry of the Ancients*, XXIV, argues that, while wasteful of land, it had the advantage of preventing the grain from lodging. Walter of Henley, who followed the Roman methods by tradition without knowing it, advises with them that to be successful in this kind of seeding the furrow at the last ploughing of the fallow should be so narrow as to be indistinguishable. “At sowing do not plough large furrows,” he says, “but little and well laid together that the seed may fall evenly: if you plough a large furrow to be quick you will do harm. How? I will tell you. When, the ground is sown then the harrow will come and pull the corn into the hollow which is between the two ridges and the large ridge shall be uncovered, then no corn shall grow there. And will you see this? When the corn is above ground go to the end of the ridge and you will see that I tell you truly. And if the land must be sown below the ridge see that it is ploughed with small furrows and the earth raised as much as you are able. And see that the ridge which is between the two furrows is narrow. And let the earth, which lies like a crest in the furrow under the left foot after the plough, be over-turned, and then shall the furrow be narrow enough.”

⁴⁶ Farrago was a mixture of refuse *far*, or spelt, with vetch, sown thick and cut green to be fed to cattle in the process now called soiling. The English word “forage” comes from this Latin original.

⁴⁷ Spanish American engineers today insert in their specifications for lumber the stipulation that it be cut on the wane of the moon. The rural confidence in the influence of the moon upon the life of a farm still persists vigorously: thus as Pliny (H.N. XVIII, 75) counselled that one wean a colt only when the moon is on the wane, so it will be found that the moon is consulted before a colt is weaned on most American farms today: for that may be safely done, says the rural oracle, only when the moon’s sign, as given in the almanack, corresponds with a part of the almanack’s “moon’s man” or “anatomic” at or below the knees, i.e., when the moon is in one or the other of the signs Pisces, Capricornus or Aquarius: but never at a time of day when the moon is in its “Southing.”

⁴⁸ Modern agricultural chemistry has contradicted this judgment of Cassius, for the manure of sea birds, especially that brought from the South American islands in the Pacific, known commercially as Peruvian guano, is found on analysis to be high in the elements which are most beneficial to plant life.

⁴⁹ Seed selection, which is now preached so earnestly by the Agricultural Department of the United States as one of the things necessary to increase the yield of wheat and corn, has ever been good practice. Following Varro Virgil (*Georgic* I, 197) insists upon it: “I have seen those seeds on whose selection much time and labour had been spent, nevertheless degenerate if men did not every year rigorously separate by hand all the largest specimens.”

⁵⁰ Cicero (de Div. II, 24) records a *mot* of Cato’s that he wondered that an *haruspex* did not laugh when he saw another— “qui mirari se aiebat, quod non rideret aruspex, aruspitem quum vidisset.”

⁵¹ This process of propagation which Varro describes as “new” is still practised by curious orchardists under the name “inarching.” The free end of a growing twig is introduced into a limb of its own tree, back of a specimen fruit, thus pushing its development by means of the supplemental feeding so provided. Cf. Cyc. Am. Hort. II, 664.

⁵² *Alfalfa* is the Moorish name which the Spaniards brought to America with the forage plant *Medicago Sativa*, Linn., which all over Southern Europe is known by the French name *lucerne*. It is proper to honour the Moors by continuing in use their name for this interesting plant, because undoubtedly they preserved it for the use of the modern world, just as undoubtedly they bequeathed to us that fine sentiment known as personal honour.

Alfalfa was one of the standbys of ancient agriculture. According to Pliny, it was introduced into Italy from Greece, whence it had been brought from Asia during the Persian wars, and so derived its Greek and Roman name *Medica*. As Cato does not mention it with the other legumes he used, it is probable that the Romans had not yet adopted it in Cato’s day, but by the time of Varro and Virgil it was well established in Italy. In Columella’s day it was already a feature of the agriculture of Andalusia, and there the Moors, who loved plants, kept it alive, as it were a Vestal fire, while it died out of Italy during the Dark Ages: from Spain it spread again all over Southern Europe, and with America it was a fair exchange for tobacco. Alfalfa has always been the subject of high praise wherever it has been known. The Greek Amphilochous devoted a whole book to it, as have the English Walter Harte in the middle of the eighteenth century and the American Coburn at the beginning of the twentieth century, but none of them is more instructive on the subject of its culture than is Columella in a few

paragraphs. Because of the difficulty of getting a stand of it in many soils, it is important to realize the pains which the Romans took with the seed bed, for it is on this point that most American farmers fail. Says Columella (II, 10):

"But of all the legumes, alfalfa is the best, because, when once it is sown, it lasts ten years: because it can be mowed four times, and even six times, a year: because it improves the soil: because all lean cattle grow fat by feeding upon it: because it is a remedy for sick beasts: because a jugerum (two-thirds of an acre) of it will feed three horses plentifully for a year. We will teach you the manner of cultivating it, as follows: The land which you wish to set in alfalfa the following spring should be broken up about the Kalends of October, so that it may mellow through the entire winter. About the Kalends of February harrow it thoroughly, remove all the stones and break up the clods. Later, about the month of March, harrow it for the third time. When you have so got the land in good order, lay it off after the manner of a garden, in beds ten feet wide and fifty feet long, so that it may be possible to let in water by the paths, and access on every side may be had by the weeders. Then cover the beds with well rotted manure. At last, about the end of April, sow plentifully so that a single measure (cynthus) of seed will cover a space ten feet long and five wide. When you have done this brush in the seed with wooden rakes: this is most important for otherwise the sprouts will be withered by the sun. After the sowing no iron tool should touch the beds; but, as I have said, they should be cultivated with wooden rakes, and in the same manner they should be weeded so that no foreign grass can choke out the young alfalfa. The first cutting should be late, when the seed begins to fall: afterwards, when it is well rooted, you can cut it as young as you wish to feed to the stock. Feed it at first sparingly, until the stock becomes accustomed to it, for it causes bloat and excess of blood. After cutting, irrigate the beds frequently, and after a few days, when the roots begin to sprout, weed out all other kinds of grass. Cultivated in this way alfalfa can be mowed six times a year, and it will last for ten years."

⁵³ See the explanation of what the Romans meant by *terra varia* in the note on Cato V. *ante*, p. 40.

⁵⁴ It is interesting to note from the statements in the text that in Varro's time the Roman farmer in Italy both sowed and reaped substantially the same amount of wheat as does the American farmer today. Varro says that the Romans sowed five modii of wheat to the jugerum and reaped on the maximum fifteen for one. As the modius was nearly the equivalent of our peck, the Roman allowance for sowing corresponds to the present American practice of sowing seven pecks of wheat to the acre: and on this basis a yield of 26 bushels to the acre, which is not uncommon in the United States, is the equivalent of the Roman harvest of fifteen for one.

It is fair to the average Italian farmer of the present day who is held up by the economists to scorn because he does not produce more than eleven bushels of wheat to the acre, to record that in Columella's time, when agriculture had declined as compared with Varro's experience, the average yield of grain in many parts of Italy did not exceed four for one (*Columella*, III, 3), or say seven and a half bushels to the acre.

Varro's statement that at Byzacium in Africa wheat yielded 100 for one, which Pliny (*II.N.* XVIII, 23) increases to 150 for one, means from 175 to 260 bushels per acre, seems incredible to us, but is confirmed by the testimony of agricultural practice in Palestine. Isaac claimed to reap an hundred fold, and the parable of the Sower alludes to yields of 30, 60 and 100 fold.

Harte *Essays on Husbandry*, 91, says that the average yield in England in the middle of the eighteenth century was seven for one, though he records the case of an award by the Dublin Society in 1763 to an Irish gentleman who raised 50 bushels of wheat from a single peck of

seed! Harte was a parson, but apparently he did not bring the same unction into his agriculture as did the Rev. Robert Herrick to the husbandry of his Devonshire glebe, a century earlier. In Herrick's *Thanksgiving to God for his House* he sings:

“Lord, ’tis thy plenty dropping hand
That soils my land
And giv’st me for my bushel sown
Twice ten for one.
Thou makst my teeming hen to lay
Her egg each day:
Besides my healthful ewes to bear
Me twins each year.”

⁵⁵ As the Gallic header here described by Varro is the direct ancestor of our modern marvellous self-binding harvester, it is of interest to rehearse the other ancient references to it.

Pliny (*H. N.* XVIII, 72) says:

“In the vast domains of the provinces of Gaul a large hollow frame armed with teeth and supported on two wheels is driven through the standing corn, the beasts being yoked behind it, the result being that the ears are torn off and fall within the frame.” Palladius (VII, 2) goes more into detail:

“The people of the more level regions of Gaul have devised a method of harvesting quickly and with a minimum of human labour, for thereby a single ox is made to bear the burden of the entire harvest. A cart is constructed on two low wheels and is furnished with a square body, of which the side boards are adjusted to slope upward and outward to make greater capacity. The front of the body is left open and there across the width of the cart are set a series of lance shaped teeth spaced to the distance between the grain stalks and curved upward. Behind the cart two short shafts are fashioned, like those of a litter, where the ox is yoked and harnessed with his head towards the cart: for this purpose it is well to use a well broken and sensible ox, which will not push ahead of his driver. When this machine is driven through the standing grain all the heads are stripped by the teeth and are thrown back and collected in the body of the cart, the straw being left standing. The machine is so contrived that the driver can adjust its height to that of the grain. Thus with little going and coming and in a few short hours the entire harvest is made. This method is available in level or prairie countries and to those who do not need to save the straw.”

That ingenious Dutchman Conrad Heresbach refers, in his *Husbandry*, to Palladius' description of the Gallic header with small respect, which indicates that in the sixteenth century it was no longer in use. I quote from Barnaby Googe's translation of Heresbach (the book which served Izaak Walton as the model for his *Compleat Angler*): “This tricke might be used in leuell and champion countries, but with us it would make but ill-favoured worke.”

Dondlinger, in his excellent *Book of Wheat* (1908), which should be in the hands of every grain farmer, gives a picture reproducing the Gallic header and says:

“After being used during hundreds of years the Gallic header disappeared, and it seems to have been completely forgotten for several centuries. Only through literature did it escape the fate of permanent oblivion and become a heritage for the modern world. The published description of the machine by Pliny and Palladius furnished the impulse in which modern harvesting inventions originated. Its distinctive features are retained in several modern inventions of this class, machines which have a practical use and value under conditions

similar to those which existed on the plains of Gaul. Toward the close of the eighteenth century, the social, economic and agricultural conditions in England, on account of increasing competition and the higher value of labour, were ripe for the movement of invention that was heralded by the printed account of the Gallic header. The first header was constructed by William Pitt in 1786. It was an attempted improvement on the ancient machine in that the stripping teeth were placed in a cylinder which was revolved by power transmitted from the wheels. This 'rippling cylinder' carried the heads of the wheat into the box of the machine, and gradually evolved into the present day reel."

It may be added that the William Pitt mentioned was not the statesman, but a contemporary agricultural writer of the same name.

⁵⁶ According to Sir Anthony Fitzherbert it was the custom in England to shear wheat and rye and to leave the straw standing after the third method described by Varro, the purpose being to preserve the straw to be cut later for thatching, as threshing it would necessarily destroy its value for thatching. It was the custom in England, however, to mow barley and oats.

⁵⁷ Pliny advises that the grain which collects on the circumference of a threshing floor of this description be saved for seed because it is evidently the heaviest.

⁵⁸ In the Apennines today the threshing floor, or *aja*, is anointed with cow dung smeared smooth with water, doubtless for the same reason that the Romans so used *amurca*.

⁵⁹ Between harvests the winnowing basket is quite generally used in Italy today for a cradle, as it was from the beginning of time, for there is an ancient gem representing the infant Bacchus asleep in a winnowing basket.

⁶⁰ What the French call, from the same practice, *vin de rognure*.

⁶¹ Varro does not mention the season of the olive harvest, but Virgil tells us (G. II, 519) that in their day as now it was winter. Cato (XX-XXII) described the construction and operation of the *trapetus* in detail. 'It can still be seen in operation in Italy, turned by a patient donkey and flowing with the new oil of an intense blue-green colour. It is always flanked by an array of vast storage jars (Cato's *dolii* now called *orci*), which make one realize the story of *Ali Baba and the Forty Thieves*.

⁶² The Roman waste of *amurca*, through ignorance of its value, was like the American waste of the cotton seed, which for many years was thrown out from the gin to rot upon the ground, even its fertilizing use being neglected. Now cotton seed has a market value equivalent to nearly 20 per cent of that of the staple. It is used for cattle feed and also is made into lard and "pure olive oil," being exported in bulk and imported again in bottles with Italian labels.

⁶³ Cf. Fowler, *Social Life at Rome in the Age of Cicero*. "Let us consider that in a large city today the person and property of all, rich or poor, are adequately protected by a sound system of police and by courts of first instance which are sitting every day. Assault and murder, theft and burglary are exceptional. It might be going too far to say that at Rome they were the rule: but it is the fact that in what we may call the slums of Rome there was no machinery for checking them.... It is the great merit of Augustus that he made Rome not only a city of marble but one in which the persons and property of all citizens were fairly secure."

There are several contemporary references to the crowded and dangerous condition of the streets of Rome at the end of the Republic. Cicero (*Plancius*, 7) tells how he was pushed

against the arch of Fabius while struggling through the press of the Via Sacra, and exonerates from blame the man who was the immediate cause of his inconvenience, holding that the one next beyond was more responsible: in which judgment Cicero was of the opinion of Mr. Justice Blackstone in the famous leading case of *Scott v. Shepherd* (1 *Smith's L.C.*, 480), where the question was who was liable for the damage eventually done by the burning squib which was passed about the market house by successive hands. The majority of the court held, however, against Blackstone and Cicero, and established the doctrine of proximate cause.

⁶⁴ The Roman week (*nundinum*, or more properly *inter nundinum*) was of eight days, the last being the market day on which the citizens rested from agricultural labour and came into town to sell and buy and talk politics. Cf. Pliny, XVIII, 3. This custom which Varro regrets had fallen into desuetude so far as Rome was concerned was in his day still practised in the provinces. Thus the five tenants on Horace's Sabine farm were wont to go every *nundinum* to the market town of Varia (the modern Vicovaro) to transact public business (*Epist.* I, 14, 2).

⁶⁵ Varro here refers to the great economic change which was coming over Italian husbandry in the last days of the Republic, the disappearance of the small farms, the "septem jugera" which nurtured the early Roman heroes like Cincinnatus and Dentatus, and even the larger, but still comparatively small, farms which Cato describes, and the development of the *latifundia* given over to grazing.

⁶⁶ The tradition is, says Pliny, that King Augeas was the first in Greece to use manure, and that Hercules introduced the practice into Italy. To the wise farmer the myth of the Augean stables is the genesis of good agriculture.

⁶⁷ This was the "crowded hour" in Varro's life, and, as M. Boissier has pointed out, he loved to dwell upon its episodes. It will be recalled that Pompey divided the Mediterranean into thirteen districts for the war with the Pirates and put a responsible lieutenant in command of each, thus enabling him by concurrent action in all the districts to clear the seas in three months. Appian gives the list of officers and the limits of their commands, saying: "The coasts of Sicily and the Ionian sea as far as Acarnania were entrusted to Plotius and Varro." It is difficult to understand Varro's own reference to Delos, but Appian makes clear how it happened that Varro was stationed on the coast of Epirus and so fell in with the company of "half Greek shepherds" who are the *dramatis personae* of the second book. As the scene of the first book was laid in a temple of Tellus, so this relating to live stock is cast in a temple of Pales, the goddess of shepherds, on the occasion of the festival of the Parilia, and the names of the characters have a punning reference to live stock.

⁶⁸ The codices here contain an interpolation of the words "HIC INTERMISIMUS," to indicate that a part of the text is missing, with which judgment of some early student of the archetype Victorius, Scaliger and Ursinus, as well as their successors among the commentators on Varro, have all agreed. It is a pleasure to record the agreement on this point, because it is believed to be unique: but many precedents for plunging the reader *in medias res*, as does the surviving text, might be found in the modern short story of the artist in style. As M. Boissier points out Varro might have cited the beginning of the *Odyssey* as a precedent for this.

⁶⁹ This is a paraphrase of a favorite locution of Homer's heroes, whose characteristic modesty does not, however, permit them to apply it to themselves, as Varro does. Thus in *Iliad*, VII, 114, Agamemnon advises Menelaos not to venture against Hector, whom "even Achilles dreadeth to meet in battle, wherein is the warrior's glory, and Achilles is better far than thou."

⁷⁰ Virgil (Aen. VII, 314) made a fine line out of this tradition, endowing the sturdy race of Fauns and Nymphs who inhabited the land of Saturn before the Golden Age, with the qualities of the trees on whose fruit they subsisted, “gensque virum truncis et duro robore nata.”

⁷¹ In the registers of the censors every thing from which the public revenues were derived was set down under the head of *pascua*, or “pasture lands,” because for a long time the pasture lands were the only source of such revenue. Cf. Pliny, *H.N.* XVIII, 3.

⁷² Olisippo is the modern Lisbon. This tradition about the mares of the region is repeated by Virgil (Geo. III, 272) by Columella (VI, 27) and by Pliny (VIII, 67). Professor Ridgeway in *The Origin and Influence of the Thoroughbred Horse* describes it as “an aetiological myth to explain the swiftness of horses” for the fleetest horses came out of the West; thus Pegasus was born at the springs of the ocean, and there is the passage in Homer (*Iliad*, XVI, 149) about the horses “that flew as swift as the winds, the horses that the harpy Podarge (Swift Foot) bare to the West Wind as she grazed on the meadows by the stream of the Ocean.” Hence we may conclude that there was a race of swift horses in Portugal in the earliest times, which Professor Ridgeway would doubtless like very much to prove, in support of his interesting thesis, were derived from Libya.

⁷³ *Hypenemia*, or barren eggs, are described intelligently by Aristotle (H.A.V. 1, 4, VI. 2, 5), and, with Varro’s confidence in the country traditions, by Pliny, *H.N.* X, 80.

If he had known it, Varro might have here cited the fact that the unfertilized queen bee is parthenogenetic, though producing only male bees; i.e., drones: but it remained for a German clergyman, Dzierzon, to discover this in the eighteenth century.

⁷⁴ Cf. Plautus *Menaechmi*, II, 2, 279. One of the two *Menaechmi* is, on his arrival at Epidamnus, mistaken for his brother, of whose existence he does not know, and much to his amazement is introduced into the brother’s life and possessions. At first he expostulates, accusing the slave of the brother, who has mistaken his identity, of being crazy and offers to exorcise him by a sacrifice of weanling pigs, wherefore he asks the question quoted in the text. Varro was evidently fond of this passage, as he quotes it again, *post*, p. 221. The *Menaechmi* is one of the immortal comedies and has survived in many forms on the modern stage all over Europe. From it Shakespeare derived the plot of the *Comedy of Errors*.

⁷⁵ It is interesting to compare these sane therapeutics with Cato’s practice less than two hundred years previous (*ante*, p. 47), which was characteristic of the superstitious peasant who in Italy still seeks the priest to bless his ailing live stock.

⁷⁶ This Atticus was Cicero’s intimate friend to whom he addressed so many of his charming letters. He changed his name as stated in the text, the new name being that of an uncle who adopted him, as we learn from his life by Nepos. As is well known to all students of Cicero, Atticus had dwelt in Athens many years and derived his income from estates in Epirus, which is the point of Scrofa’s jest.

⁷⁷ This requirement of short legs is the more remarkable because of the long journeys which Varro says the Roman sheep were required to make between their summer and winter pastures. A similar necessity and bad roads created in England, before the eighteenth century, a demand for long legged sheep. Prothero (*English Farming Past and Present*) quotes a description of the “true old Warwickshire ram” in 1789: “His frame large and remarkably loose. His bone throughout heavy. His legs long and thick, terminating in large splaw feet.”

One of the things which Bakewell accomplished was to shorten the legs as well as to increase the mutton on his New Leicesters. Of Bakewell, Mr. Prothero justly says, "By providing meat for the million he contributed as much to the wealth of the country as Arkwright or Watt."

⁷⁸ Shepherds still look for the black or spotted tongue in the mouth of the ram, for the reason given by Varro, but the warning is no longer put in the shepherds' manual.

⁷⁹ Varro would still feel at home in Apulia, for there the sheep industry is carried on much as it was in his time, and thence the *calles publicae*, to which he refers, still lead to the summer pastures in the Apennines. Cf. Beauclerk *Rural Italy*, chap. V. "The extensive pasturages of the 'Tavoliere di Puglia' (Apulia) are of great importance and have a history of their own. This vast domain covers 750,000 acres: its origin belongs to the time of the Roman Conquests and the protracted wars of the Republic, which were fought out in the plains, whence they became deserted and uncultivated, fit only for public pastures in winter time ... the periodical emigrations of the flocks continue as in the past times: they descend from the mountains into the plains by a network of wide grassy roads which traverse the region in every direction and are called *tratturi*. These lanes are over 100 yards in width and cover a total length of 940 miles.... Not less than 50,000 animals are pastured on the Tavoliere, requiring over 1,500 square miles of land for their subsistence.... Five thousand persons are employed as shepherds."

⁸⁰ Varro quite uniformly uses words which indicate that he was accustomed to see sheep driven (*abigere, propellere, adpellere*) but we can see the flocks *led* in Italy today, as they were in Palestine soon after Varro's death, according to the testimony of that beautiful figure of the Good Shepherd (*St. John*, X, 4): "And when he putteth forth his own sheep he goeth before them, and the sheep follow him, for they know his voice." R. Child, in his "Large Letter" in Hartlib's *Legacie*, gives the explanation of the difference in the custom:

"Our sheep do not follow their shepherds as they do in all other countries: for the shepherd goeth before and the sheep follow like a pack of dogs. This disobedience of our sheep doth not happen to us, as the Papist Priests tell their simple flocks, because we have left their great shepherd the Pope; but because we let our sheep range night and day in our fields without a shepherd: which other countries dare not for fear of wolves and other ravenous beasts, but are compelled to guard them all day with great dogs and to bring them home at night, or to watch them in their folds."

⁸¹ Cf. Dante, *Purg.* XXVII, 79.

"Le capre
Tacite all' ombra mentre che'l sol ferve
Guardate dal pastor che'n su la verga
Poggiato s'e, e lor poggiato serve."

⁸² It will be recalled that when Odysseus, disguised as a beggar, was making his way to his house in company with the faithful swineherd Eumaeus, they met the goatherd Melanthius "leading his goats to feast the wooers, the best goats that were in all the herds." (*Odyssey*, XVII, 216), and that subsequently he suffered a terrible punishment for this unfaithfulness to his master's interests.

⁸³ Pliny (VIII, 76) calls these excrescences *lancinae*, or folds, and attributes them exclusively to the she goat, as Varro seems to do also, but Columella (VII, 6) attributes them to the buck.

⁸⁴ Aristotle (*H.A.* I, 9.1) refers to this opinion and denounces it as erroneous.

⁸⁵ The Roman *denarius*, which has been here and later translated *denier*, may be considered for the purpose of comparing values as, roughly, the equivalent of the modern franc, or lira, say 20 cents United States money.

⁸⁶ Macrobius (*Saturn.* I, 6) tells another story of the origin of this cognomen, which, if not so heroic as that in the text, is entertaining. It is related that a neighbour's sow strayed on Tremelius' land and was caught and killed as a vagrant. When the owner came to claim it and asserted the right to search the premises Tremelius hid the carcass in the bed in which his wife was lying and then took a solemn oath that there was no sow in his house except that in the bed.

⁸⁷ It would seem, as Gibbon says of the Empress Theodora, that this passage could be left "veiled in the obscurity of a learned language"; but it may be noted that the *locus classicus* for the play on the word is the incident of the Megarian "mystery pigs" in Aristophanes' *Acharnians*, 728 ff. Cf. also Athenaeus, IX, 17, 18.

⁸⁸ Cf. Pliny (*H.N.* VIII, 77): "There is no animal that affords a greater variety to the palate of the epicure: all the others have their own peculiar flavour, but the flesh of the hog has nearly fifty different flavours."

⁸⁹ In his stimulating book, *Comment la route crée le type Social*, Edmond Desmolins submits an ingenious hypothesis to explain the pre-eminence of the Gauls in the growing and making of pork, and how that pre-eminence was itself the explanation of their early success in cultivating the cereals. He describes their migrating ancestors, the Celts, pushing their way up the Danube as hordes of nomad shepherds with their vast flocks and herds of horses and cattle, on the milk of which they had hitherto subsisted. So long as they journeyed through prairie steppes, the last of which was Hungary, they maintained their shepherd character, but when they once passed the site of the present city of Vienna and entered the plateau of Bavaria, they found new physical conditions which caused them to reduce and to separate their herds of large cattle — an unbroken forest affording little pasture of grass. Here they found the wild boar subsisting upon the mast of the forest, and him they domesticated out of an economic necessity, to take the place of their larger cattle as a basis of food supply. Until then they had not been meat eaters, and so had known no necessity for cereals, for milk is a balanced ration in itself. But this change of diet required them also to take to agriculture and so to abandon their nomad life.

'By reason of the habits of the animal, swine husbandry has a tendency in itself to confine those engaged in it to a more or less sedentary life, but we are about to see how the Celts were compelled to accomplish this important evolution by an even more powerful force. Meat cannot be eaten habitually except in conjunction with a cereal ... and of all the meats pork is the one which demands this association most insistently, because it is the least easily digested and the most heating of all the meats.... So that is how the adoption of swine husbandry and a diet of pork compelled our nomad Celts to take the next step and settle down to agriculture.'

⁹⁰ This Gallic *tomacina* was doubtless the ancestor of the *mortadella* now produced in the Emilia and known to English speaking consumers as "Bologna" sausage.

⁹¹ The Gaul of which Cato was here writing is the modern Lombardy, one of the most densely populated and richest agricultural districts in the world. Here are found today those truly marvellous "marchite" or irrigated meadows which owe the initiative for their existence to the

Cistercian monks of the Chiaravalle Abbey, who began their fruitful agricultural labours in the country near Milan in the twelfth century. There is a recorded instance of one of these meadows which yielded in a single season 140 tons of grass per hectare, equal to 75 tons of hay, or 30 tons per acre! The meadows are mowed six times a year, and the grass is fed green to Swiss cows, which are kept in great numbers for the manufacture of “frommaggio di grana,” or Parmesan cheese. This system of green soiling maintains the fertility of the meadows, while the by-product of the dairies is the feeding of hogs, which are kept in such quantity that they are today exported as they were in the times of Cato and Varro. There is no region of the earth, unless it be Flanders, of which the aspect so rejoices the heart of a farmer as the Milanese. Well may the Lombard proverb say, “Chi ha prato, ha tutto.”

⁹² Virgil (*Aen.* VII, 26) subsequently made good use of this tradition of the founding of Lavinium, the sacred city of the Romans where the Penates dwelt and whither solemn processions were wont to proceed from Rome until Christianity became the State religion. The site has been identified as that of the modern village of Practica, where a few miserable shepherds collect during the winter months, fleeing to the hills at the approach of summer and the dread *malaria*.

⁹³ Cf. Polybius, XII, 4: ‘For in Italy the swineherds manage the feeding of their pigs in the same way. They do not follow close behind the beasts, as in Greece, but keep some distance in front of them, sounding their horn every now and then: and the animals follow behind and run together at the sound. Indeed, the complete familiarity which the animals show with the particular horn to which they belong seems at first astonishing and almost incredible. For, owing to the populousness and wealth of the country, the droves of swine in Italy are exceedingly large, especially along the sea coast of the Tuscans and Gauls: for one sow will bring up a thousand pigs, or some times even more. They, therefore, drive them out from their night styes to feed according to their litters and ages. When if several droves are taken to the same place they cannot preserve these distinctions of litters: but they, of course, get mixed up with each other both as they are being driven out and as they feed, and as they are being brought home. Accordingly, the device of the horn blowing has been invented to separate them when they have got mixed up together, without labour or trouble. For as they feed one swineherd goes in one direction sounding his horn, and another in another and thus the animals sort themselves of their own accord and follow their own horn with such eagerness that it is impossible by any means to stop or hinder them. But in Greece when the swine get mixed up in the oak forests in their search for the mast, the swineherd who has most assistants and the best help at his disposal, when collecting his own animals drives off his neighbours’ also. Some times, too, a thief lies in wait and drives them off without the swineherd knowing how he has lost them, because the beasts straggle a long way from their drivers in their eagerness to find acorns, when they are just beginning to fall.’

Bishop Latimer in one of his sermons quotes the phrase used in his youth, at the time of the discovery of America, in calling hogs: ‘Come to thy minglemangle, come pur, come pur.’ It would be impossible to transcribe the traditional call used in Virginia. One some times thinks that it was the original of the celebrated ‘rebel yell’ of General Lee’s army.

⁹⁴ The use of the Greek salutation was esteemed by the more austere Romans of the age of Scipio an evidence of preciosity, to be laughed at: and so Lucienus’ jesting apology for the use of it here doubtless was in reference to Lucilius’ epigram which Cicero has preserved, *de Finibus*, I, 3.

“Graece ergo praetor Athenis

Id quod maluisti te, quum ad me accedi, saluto

[Greek: Chaire inquam, Tite: lictores turma omni cohorsque

[Greek: Chaire] Tite! Hinc hostis mi Albucius, hinc inimicus.”

It was the word which the Romans taught their parrots. Cf. Persius, *Prolog.* 8.]

⁹⁵ The working ox was respected by the ancient Romans as a fellow labourer. Valerius Maximus (VIII, 8 *ad fin.*) cites a case of a Roman citizen who was put to death, because, to satisfy the craving of one of his children for beef to eat, he slew an ox from the plough. Ovid puts this sentiment in the mouth of Pythagoras, when he agrees that pigs and goats are fit subjects for sacrifice, but protests against such use of sheep and oxen. (*Metamor.* XV, 139.)

“Quid meruere boves, animal sine fraude dolisque
Innocuum, simplex, natum tolerare labores?
Immemor est demum, nee frugum manere dignus
Qui potuit curvi demto modo pondere arati
Ruricolam mactare suum: qui trita labore
Ilia quibus toties durum renovaverat arum
Tot dederse messes, percussit colla securi.”

⁹⁶ The learned commentators have been able to discover nothing about either this Plautius or this Hirrius, but it appears that Archelaus wrote a book under the title *Bugonia*, of which nothing survives. It may be conjectured, however, on the analogy of Samson’s riddle to the Philistines, “Out of the eater came forth meat, and out of the strong came forth sweetness,” (*Judges*, XIV, 14), that Plautius meant to imply that some good might be the consequence of the evil Hirrius had done: and that Vaccius cited the allusion to suggest to Varro that, while he might know nothing much about cattle, his attempt to deal with the subject might provoke some useful discussion.

⁹⁷ Darwin, *Animals and Plants*, II, 20, cites this passage and says that “at the present day the natives of Java some times drive their cattle into the forests to cross with the wild Banteng.” The crossing of wild blood on domestic animals is not, however, always successful. A recent visitor to the German agricultural experiment station at Halle describes “a curious hairy beast with great horns, a wild look in his eye, a white streak down his back and a bumpy forehead, which had in it blood from cattle which had lived on the plains of Thibet, which had grazed on the lowland pastures of Holland, which had roamed the forests of northeast India and of the Malay Peninsular, and had wandered through the forests of Germany. We Americans had sympathy for this beast. He was some thing like ourselves, with the blood of many different races flowing through his veins.”

⁹⁸ Pliny (VIII, 66) cites the fact that the Scythians always preferred mares to stallions for war, and gives an ingenious reason for the preference. Aristotle (*H.A.* VI, 22) says that the Scythians rode their pregnant mares until the very last, saying that the exercise rendered parturition more easy. Every breeder of heavy draft horses has seen a mare taken from the plough and have her foal in the field, with no detriment to either: and the story of the mare Keheilet Ajuz, who founded the best of the Arab families, is well known, but bears repetition. I quote from Spencer Borden, *The Arab Horse*, p. 44: “It is related that a certain Sheik was flying from an enemy, mounted on his favourite mare. Arab warriors trust themselves only to mares, they will not ride a stallion in war. The said mare was at the time far along toward parturition: indeed she became a mother when the flying horseman stopped for rest at noonday, the new comer being a filly. Being hard pressed the Sheik was compelled to remount his mare and again seek safety in flight, abandoning the newborn filly to her fate. Finally reaching safety among his own people, great was the surprise of all when, shortly after the arrival of the Sheik on his faithful mare, the little filly less than a day old came into camp

also, having followed her mother across miles of desert. She was immediately given into the care of an old woman of the tribe (Ajuz = an old woman), hence her name Keheilet Ajuz, ‘the mare of the old woman,’ and grew to be the most famous of all the animals in the history of the breed.”

⁹⁹ Varro does not describe the livery of the horses of his day, as he does of cattle, but Virgil (*Georg.* III, 81) supplies the deficiency, asserting that the best horses were bay (*spadices*) and roan (*glauci*) while the least esteemed were white (*albi*) and dun (*gilvi*), which is very interesting testimony in support of the most recent theory of the origin of the thoroughbred horse. Professor Ridgeway who, opposing Darwin’s conclusion, contends for a multiple origin of the historic and recent races of horses, has collected a mass of information about the marking of famous horses of all ages in his *Origin and Influence of the Thoroughbred Horse*. He maintains that a bay livery, with a white star and stockings, the development of protective coloration from an originally striped coat, such as has gone on more recently in the case of the quaggas, is absolute evidence of the North African origin of a horse, and he shows that all the swiftest horses mentioned in history are of that race, while the heavier and less mettlesome horses of Northern origin have been, when pure bred, dun coloured or white.

Of the Italian breeds mentioned by Varro, Professor Ridgeway conjectures that the Etruscan (or Rosean) was probably an improved Northern horse, while the Apulian, from the South of Italy, represented an admixture of Libyan blood.

¹⁰⁰ Aristotle (*H.A.* VI, 22) preceded Varro with this good advice, saying that a mare “produces better foals at the end of four or five years. It is quite necessary that she should wait one year and should pass through a fallow, as it were — [Greek: poiein ospēr neion.]”

¹⁰¹ Mules were employed in antiquity from the earliest times. In Homer they were used for drawing wagons: thus Nausicaa drove a mule team to haul out the family wash, and Priam made his visit to Achilles in a mule litter. Homer professes to prefer mules to oxen for ploughing. There were mule races at the Greek games. Aristotle (*Rhetoric*, III, 2) tells an amusing story of Simonides, who, when the victor in the mule race offered him only a poor fee, refused to compose an ode, pretending to be shocked at the idea of writing about “semi-asses,” but, on receipt of a proper fee, he wrote the ode beginning: “Hail, daughters of storm-footed mares,” although they were equally daughters of the asses.

¹⁰² The breed of Maremma sheep dogs, still preferred in Italy, is white. He is doubtless the descendant of the large woolly “Spitz” or Pomeranian wolf dog which is figured on Etruscan coins.

¹⁰³ In his essay, *Notre ami le chien*, Maeterlinck maintains eloquently that the dog alone among the domestic animals has given his confidence and friendship to man. “We are alone, absolutely alone, on this chance planet: and amid all the forms of life that surround us not one excepting the dog has made alliance with us. A few creatures fear us, most are unaware of us, and not one loves us. In the world of plants, we have dumb and motionless slaves: but they serve us in spite of themselves.... The rose and the corn, had they wings, would fly at our approach, like birds. Among the animals, we number a few servants who have submitted only through indifference, cowardice or stupidity: the uncertain and craven horse, who responds only to pain and is attached to nothing ... the cow and the ox happy so long as they are eating and docile because for centuries they have not had a thought of their own.... I do not speak of the cat, to whom we are nothing more than a too large and uneatable prey: the ferocious cat whose side long contempt tolerates us only as encumbering parasites in our own homes. She at least curses us in her mysterious heart: but all the others live beside us as they might live

beside a rock or a tree.”

The effective use of this thesis in the scene of the revolt of the domestic animals in the Blue Bird will be remembered.

¹⁰⁴ This method of securing the faithful affection of a dog is solemnly recommended, without acknowledgment to Saserna, in the seventeenth century editions of the *Maison Rustique* (I, 27).

¹⁰⁵ Keil happily points out that in his book on the Latin language (VII, 31), Varro quotes the “ancient proverb” to which he here refers, viz.: “canis caninam non est” dog doesn’t eat dog.

¹⁰⁶ Aristotle (*H.A.* VI, 20) says that puppies are blind from twelve to seventeen days, depending upon the season of the year at which they are born. Pliny (*H.N.* VIII, 62) says from seven to twenty days, depending upon the supply of the mother’s milk.

¹⁰⁷ It was among these hardy shepherd slaves that Spartacus recruited his army in 72-71 B.C., as did Caelius and Milo in 48 B.C., while their descendants were the brigands who infested Southern Italy even in the nineteenth century.

¹⁰⁸ Gaius, I, 119, II, 24, 41, describes in detail the processes here referred to by which a slave was acquired under the Roman law.

¹⁰⁹ Dennis, in his *Cities and Cemeteries of Etruria*, draws a picture of modern Italy which may serve to illustrate Varro’s sketch of the mountain life of the shepherds of his day:

“Occasionally in my wanderings on this site (Veii) I have entered, either from curiosity or for shelter, one of the *capanne* scattered over the downs. These are tall conical thatched huts which the shepherds make their winter abode. For in Italy, the lowlands being generally unhealthy in summer, the flocks are driven to the mountains about May, and as soon as the great heats are past are brought back to the rich pastures of the plains. It is a curious sight, the interior of a *capanna*, and affords an agreeable diversity to the antiquity hunter. A little boldness is requisite to pass through the pack of dogs, white as new dropt lambs, but large and fierce as wolves, which, were the shepherd not at hand, would tear in pieces whoever might venture to approach the hut: but with one of the *pecoraj* for a Teucer, nothing is to be feared. The *capanne* are of various sizes. One I entered not far from Veii was thirty or forty feet in diameter and fully as high, propped in the centre by two rough masts, between which a hole was left in the roof for the escape of smoke. Within the door lay a large pile of lambs, there might be a hundred, killed that morning and already flayed, and a number of shepherds were busied in operating on the carcases of others: all of which were to be dispatched forthwith to the Roman market. Though a fierce May sun blazed without, a huge fire roared in the middle of the hut: but this was for the sake of the *ricotta*, which was being made in another part of the *capanna*. Here stood a huge cauldron, full of boiling ewes’ milk. In a warm state this curd is a delicious jelly and has often tempted me to enter a *capanna* in quest of it, to the amazement of the *pecoraj*, to whom it is *vilior alga*. Lord of the cauldron, stood a man dispensing ladlefuls of the rich simmering mess to his fellows, as they brought their bowls for their morning allowance: and he varied his occupation by pouring the same into certain small baskets, the serous part running off through the wicker and the residue caking as it cooled. On the same board stood the cheeses, previously made from the cream. In this hut lived twenty-five men, their nether limbs clad in goat skins, with the hair outwards, realizing the satyrs of ancient fable: but they had no nymphs to tease, nor shepherdesses to woo, and never

‘sat all day Playing on pipes of corn, and versing love To amorous Phillida.’

They were a band of celibates without the vows. In such huts they dwell all the year round, flaying lambs or shearing sheep, living on bread, *ricotta* and water, very rarely tasting meat or wine and sleeping on shelves ranged round the hut, like berths in a ship’s cabin. Thus are the dreams of Arcadia dispelled by realities.”

¹¹⁰ In modern Italy the shepherds do not take their women with them to the *saltus*, but, as Dennis says, lead there the life of “celibates, without the vows.”

¹¹¹ In the Venitian provinces of Italy today the women are still seen at work in the harvest and rice fields with their babes in their bosoms: but the most amazing modern spectacle of this kind is that of women coaling ships in the East, carrying their unhappy youngsters up and down the coal ladders throughout the work.

¹¹² The author of *Maison Rustique* did not agree with Varro in this opinion. I quote from Surflet’s translation of 1606 (I, 7):

“And for writing and reading it skilleth not whether he be able to doe it or no, or that he should have any other charge to looke unto besides that of yours, or else that he should use another to set downe in writing such expences as he hath laid out: for paper will admit any thing.”

¹¹³ This temple and fig tree stood in Rome at the foot of the Palatine hill, in the neighbourhood of the Lupercal. It was under this fig tree that Romulus and Remus were supposed to have been suckled by the wolf.

¹¹⁴ ‘That is the beste grease that is to a shepe, to grease hym in the mouthe with good meate,’ says Sir Anthony Fitzherbert.

¹¹⁵ Pliny (VII, 59) says that most nations learn the use of barbers next after that of letters, but that the Romans were late in this respect. Varro himself wore a beard, as appears on the coin he struck during the war with the Pirates. It is reproduced in Smiths *Dict. Gr. and Rom. Biog.*, III, p. 1227.

¹¹⁶ Cowper’s verse in *The Task* seems to be all that is happy in the way of translation of Varro’s text, “divina natura dedit agros, ars humana aedificavit urbes”: but Cowley’s “God the first garden made, and the first city Cain” was probably Cowper’s source. Cowley was a reader of Varro, as his pleasant and sane essay *Of Agriculture* shows.

¹¹⁷ Following the precedent of the first and second books in the matter of local colour, the scene of this third book, relating to villas and the “small deer,” which were there reared, is laid in the *villa publica* at Rome, and the characters of the dialogue are selected for the suggestion which their names may make of the denizens of the aviary, the barn yard and the bee-stand.

¹¹⁸ This Appius Claudius Pulcher served in Asia under his brother-in-law Lucullus, was Augur in B.C. 59, Consul in 54 and Censor in 50. He wrote a book on augural law and the habits of birds at which Cicero poked some rather mean fun. He fixes the date of the dialogue.

¹¹⁹ In Varro’s time, as today, the river Velinus drained the fresh pastures of the Umbrian

prairie of Rosea, “the nurse of Italy,” which lay below the town of Reate (the modern Rieti), and was originally the bed of a lake. Its waters are so strongly impregnated with carbonate of lime that by their deposit of travertine they tend to block their own channel. The drainage of Rosea has, therefore, always been a matter of concern to the live stock industry of Reate, and in B.C. 272 M. Curius Dentatus opened the first of several successful artificial canals (the last dating from the sixteenth century, A.D.), which still serve to lead the Velinus into the Nar at the renowned Cascade delle Marmore. For two hundred years the people of Interamna (the modern Terni) had complained that their situation below the falls was endangered by Curius’ canal, and finally in B.C. 54 the Roman Senate appointed the commission to which Appius Claudius refers in the text, to hear the controversy. Cicero was retained as counsel for the people of Reate, and during the hearing stopped, as Appius Claudius did, with our friend Axius at his Reatine villa, and wrote about the visit to the same Atticus whom we met in Varro’s second book, as follows (*ad Atticum*, IV, 15): “After this was over the people of Reate summoned me to their Tempe to plead their cause against the people of Interamna, before the Consul and ten commissioners, the question being concerning the Veline lake, which, drained by M. Curius by means of a channel cut through the mountain, now flows into the Nar: by this means the famous Rosea has been reclaimed from the swamp, though still fairly moist. I stopped with Axius, who took me also to visit the Seven Waters.” What was once deemed a danger is a double source of profit to the modern folk of Interamna. Tourists today crowd to see the same waterfall which Cicero visited, taking a tram from the busy little industrial town of Terni: and the waters which flow from Velinus now serve to generate power with which armour plates are manufactured for the Italian navy on the site of the ancient Interamna.

¹²⁰ Sicilian honey was famous for its flavour because of the bee pasture of thyme which there abounded, especially at Hybla. Theophrastus (H.P. III, 15, 5) explains that the honey of Corsica had an acrid taste, because the bees pastured there largely on box trees.

¹²¹ These denizens of the Roman villa are all enumerated by Martial in his delightful verses (III, 38) upon Faustinus’ villa at Baiae. The picture of the barn yard is very true to life in all ages, especially the touch of the hungry pigs sniffing after the pail of the farmer’s wife:

“Vagatur omnis turba sordidae cortis
Argutus anser, gemmeique pavones
Nomenque debet quae rubentibus pennis,
Et picta perdux, Numidicaeque guttatae
Et impiorum phasiana Colchorum.
Rhodias superbi feminas prement galli
Sonantque turres plausibus columbarum,
Gemit hinc palumbus, inde cereus turtur
Avidi sequuntur villicae sinum porci:
Matremque plenam mollis agnus expectat.”

¹²² The *sestertius* was one quarter of a *denarius*, or, say, the equivalent of five cents. It was also called *nummus*, as we say “nickel.” The ordinary unit used by the Romans in reckoning considerable sums of money was 1,000 sesterces, which may accordingly be translated as the equivalent of (say) \$50. Axius’ jackass thus cost \$2,000, while Seius’ income from his villa was \$2,500 per annum, that of Varro’s aunt from her aviary was \$3,000, and that of Axius from his farm \$1,500. Cicero records that Axius was a money lender, which explains the fun here made of his avarice.

¹²³ Columella, writing about one hundred years after Varro, refers to this passage and says that luxury had so developed since Varro’s time that it no longer required an extraordinary

occasion, like a triumph, to bring the price of thrushes to three *denarii* a piece, but that that had become a current quotation.

¹²⁴ A minerval was the fee (of Minerva) paid to a school teacher.

¹²⁵ The inventor of the auspices *ex tripudiis* or the feeding of chickens was evidently an ingenious poultry fancier who succeeded in securing the care of his favourites at the public charge.

¹²⁶ This was L. Marcius Philippus, the orator mentioned by Horace (*Epist.* I, 7, 46), who was Consul in B.C. 91, and was celebrated for his luxurious habits, which his wealth enabled him to gratify. His son married the widow of C. Octavius and so became the step-father of the Emperor Augustus.

¹²⁷ This was *turdus pilaris*, the variety of thrush which is called field fare.

¹²⁸ The traveller by railway from Rome to Naples passes near Varro's estate of Casinum, and if he stops at the mediaeval town of San Germano to visit the neighbouring Badia di Monte Cassino, where the "angelic doctor" Thomas Aquinas was educated, he will find Varro's memory kept green: for he will be entertained at the *Albergo Varrone* ("very fair but bargaining advisable," sagely counsels Mr. Baedeker) and on his way up the long winding road to the Abbey there will be pointed out to him the river Rapido, on the banks of which Varro's aviary stood, and nearby what is reputed to be the site of the old polymath's villa which Antony polluted with the orgies Cicero described in the second Philippic. Antony's destruction of his library was a great blow to Varro, but one likes to think that his ghost can take satisfaction in the maintenance, so near the haunts of his flesh, of such a noble collection of books as is the continuing pride of the Abbey on the mountain above.

¹²⁹ Varro's Museum, or study where he wooed the Muses, on his estate at Casinum was not unlike that of Cicero at his native Arpinum, which he described (*de Leg.* II, 3) agreeably as on an island in the cold and clear Fibrenus just above its confluence with the more important river Liris, where, like a plebeian marrying into a patrician family, it lost its name but contributed its freshness. The younger Pliny built a study in the garden of his Laurentine villa near Ostia, which he describes (II, 17) with enthusiasm: "*horti diaeta est, amores mei, re vera amores*": and here he found refuge from the tumult of his household during the festivities of the Saturnalia, which corresponded with our Christmas. In the ante bellum days every Virginia gentleman had such an "office" in his house yard where he pretended to transact his farm business, but where actually he was wont to escape from the obligations of family and continuous hospitality.

¹³⁰ The commentators on this interesting but obscure description of Varro's aviary have at this point usually endeavoured to explain the arrangements of the chamber under the lantern of the *tholus* with respect to its use as a dining room which Varro frequented himself, and hence have been amused into all kinds of difficulties of interpretation. The references to the *convivae* are what lead them astray, and it remained for Keil to suggest that this was a playful allusion to the birds themselves, a conclusion which is strengthened by Varro's previous statement of the failure of Lucullus' attempt to maintain a dining room in his aviary.

¹³¹ Cf. Vitruvius, I, 6: "Andronicus Cyrrhestes built at Athens an octagonal marble tower, on the sides of which were carved images of the eight winds, each on the side opposite that from which it blew. On the pyramidal roof of this tower he placed a bronze Triton holding a rod in his right hand, and so contrived that the Triton, revolving with the wind, always stood

opposed to that which prevailed, and thus pointed with his rod to the image on the tower of the wind that was blowing at the moment." The ruins of this Tower of the Winds may still be seen in Athens. There is a picture of it in Harper's Dictionary of Classical Antiquities in the article *Andronicus*.

¹³² One ventures to translate *athletoe comitiorum* by Mr. Gladstone's famous phrase.

¹³³ Reading "tesserulas coicientem in loculum."

¹³⁴ A French translator might better convey the intention of the pun, contained in the *ducere serram* of the text, by the locution, *une prise de bec*.

¹³⁵ It probably will not comfort the ultimate consumer who holds in such odium the celebrated "Schedule K" of the Payne-Aldrich tariff, to realize that the American wool grower puts no higher value on his sheep than did his Roman ancestor, as revealed by this quotation from the stock yards of Varro's time. It is interesting, however, to the breeder to know that a good price for wool has always stimulated the production of the best stock. Strabo says that the wool of Turdetania in Spain was so celebrated in the generation after Varro that a ram of the breed (the ancestors of the modern Merino) fetched a talent, say \$1,200; a price which may be compared with that of the prize ram recently sold in England for export to the Argentine for as much as a thousand pounds sterling, and considered a good commercial investment at that. Doubtless the market for Rosean mules comforted Axius in his investment of the equivalent of £400 in a breeding jack.

¹³⁶ In feudal times the right to maintain a dove cote was the exclusive privilege of the lord of the manor. According to their immemorial custom, which Varro notices, the pigeons preyed on the neighbourhood crops and were detested by the community in consequence. During the French revolution they were one of the counts in the indictment of the land-owning aristocracy, and in the event the pigeons as well as their owners had the sins of their forefathers justly visited upon them. The American farmer who has a pigeon-keeping neighbour and is restrained by the pettiness of the annoyance from making a point on their trespasses, feels something of the blind and impotent wrath of the French peasant against the whole pigeon family.

¹³⁷ It appears that the Romans actually hired men to chew the food intended for cramming birds, so as to relieve the unhappy victims even of such exercise as they might get from assimilating their diet. Columella (VII, 10) in discussing the diet of thrushes deprecates this practice, sagely saying that the wages of the chewers are out of proportion to the benefit obtained, and that any way the chewers swallow a good part of what they are given to macerate.

The typical tramp of the comic papers who is forever looking for occupation without work might well envy these Roman professional chewers. Not even Dr. Wiley's "poison squad" employed to test food products could compare with them.

¹³⁸ These prices of \$10 and \$50 and even \$80 a pair for pigeons, large as they seem, were surpassed under the Empire. Columella says (VIII, 8): "That excellent author, M. Varro, tells us that in his more austere time it was not unusual for a pair of pigeons to sell for a thousand sesterces, a price at which the present day should blush, if we may believe the report that men have been found to pay for a pair as much as four thousand *nummi*." (\$200.)

¹³⁹ The market for chickens and eggs in the United States would doubtless astonish the people of Delos as much as the statistics do us (*ipsa suas mirantur Gargara messes!*). It is solemnly recorded that the American hen produces a billion and a quarter dozen eggs per annum, of a value greater than that of either the wheat or cotton crops, and yet there are many of us who cannot get our hens to lay more than a hundred eggs a year!

¹⁴⁰ Reading *ad infirma crura*. This practice is explained more at length by Columella (VIII, 2, 3) who specifies the spurs, *calcaribus inustis*.

Buffon, who describes a 'practice of trimming the combs of capons, adds (V, 302) an interesting account of an experiment which he says he had made "*une espece de greffe animale*": after trimming the comb of a growing cockerel his budding spurs were cut out and grafted on the roots of the comb, where they took root and flourished, growing to a length of two and a half inches, in some cases curving forward like the horns of a ram, and in others turning back like those of a goat.

¹⁴¹ The dusting yard which Varro here describes was in the open, but Columella (VIII, 3) advises what modern poultry farmers pride themselves upon having recently discovered, — a covered scratching pen strewn with litter to afford exercise for the hens in rough weather. It will be observed that, so far as ventilation is concerned, Varro recommends a hen house open to the weather: this is another standard of modern practice which has had a hard struggle against prejudice. Columella adds two more interesting bits of advice, that for the comfort of the hens the roosts should be cut square, and for cleanliness their water trough should be enclosed leaving only openings large enough to receive a hen's head. With so much enlightenment and sanitation one would expect one or the other of these Romans to tell us of some "teeming hen" like Herrick's who laid "her egg each day."

We are proud to be able to cite the eminent Roseburg Industrious Biddy who, in the year of grace 1912, achieved the championship of America with a record of 266 eggs in ten months and nineteen days, and was sold for \$800: but Varro is content to suggest that a hen will lay more eggs in a season than she can hatch, and the conservative Columella (VIII, 5) that the number of eggs depends upon diet.

¹⁴² The guinea fowl got their Greek name, *meleagrides*, because the story was that the sisters of Meleager were turned into guinea hens. Pliny (*H.N.* X, 38) says that they fight every year on Meleager's tomb. It is a fact that they are a pugnacious fowl. Buffon says that guinea fowl disappeared from Europe in the Dark Ages and were not known again until the route to the Indies via the Cape of Good Hope was opened when they were imported anew from the west coast of Africa.

¹⁴³ Reading, "*propter fastidium hominum*." Cf. Pliny (X, 38), whose explanation is "*propter ingratum virus*."

¹⁴⁴ There is a Virginia practice of feeding a fat turkey heavily on bread soaked in wine or liquor just before he is killed, the result being that as the turkey gets into that condition which used to put our ancestors under the table, he relaxes all his tendons and so is sweeter and more tender when he comes above the table. There is a humanitarian side to the practice which should recommend it even to the W.C.T.U. as well as to the epicure.

¹⁴⁵ Many thousands of geese used to be driven every year to Rome from the land of the Morini in Northern Gaul, but the Germans are the modern consumers. A British consular report says that in addition to the domestic supply a special "goose train" of from fifteen to

forty cars is received daily in Berlin from Russia. It would seem that the goose that lays the golden egg has emigrated to Muscovy. Buffon says that the introduction of the Virginia turkey into Europe drove the goose off the tables of all civilized peoples.

¹⁴⁶ Columella (VIII, 14) repeats this myth, but Aristotle (*H.A.* V, 2, 9) says that geese bathe *after* breeding. Buffon gives a Gallic touch, “ces oiseaux preludent aux actes de l’amour en allant d’abord s’egayer dans l’eau.”

¹⁴⁷ Reading *seris*. It is the *Cichorium endivia* of Linnaeus. Cf. Pliny (*H.N.* XX, 32.)

¹⁴⁸ Varro does not mention it, but the Romans knew and prized *pâté de foie gras* under the name *ficatum*, which indicates that they produced it by cramming their geese with a diet of figs. Cf. Horace’s verse “pinguibus et ficis pastum iecur anseris albi.”

In Toulouse, whence now comes the best of this dainty of the epicure, the geese are crammed daily with a dough of corn meal mixed with the oil of poppies, fed through a tin funnel, which is introduced into the esophagus of the unhappy bird. At the end of a month the stertorous breathing of the victim proclaims the time of sacrifice to Apicius. The liver is expected to weigh a kilogram, (say two pounds), while at least two kilograms of fat are saved in addition, to garnish the family *plat* of vegetables during the remainder of the year.

¹⁴⁹ Reading *foeles*, which Keller, in his account of the fauna of ancient Italy in the *Cambridge Companion to Latin Studies*, identifies with *Martes vulgaris*. Sir Anthony Fitzherbert calls them fullymartes. It does not appear that the Romans had in Varro’s time brought from Egypt our household cat, *F. maniculata*. They used weasels and tame snakes for catching mice.

¹⁵⁰ Darwin (*Animals and Plants*, I, 8) cites this passage and argues that Varro’s advice to cover the duck yard with netting to keep the ducks from flying out is evidence that in Varro’s time ducks were not entirely domesticated, and hence that the modern domestic duck is the same species as the wild duck. It may be noted, however, that Varro gives the same advice about netting the chicken yard, having said that chickens had been domesticated from the beginning of time.

¹⁵¹ The ancient Etruscan city of Tarquinii is now known as Corneto. The wild sheep which Lippinus there kept in his game preserves were probably the *mouflon* which are still hunted in Sardinia and Corsica, though they may have been the Phrygian wild sheep (*Aegoceros argali*) which Varro mentions in Book II. Pliny (*H.N.* VIII, 211) says that this Lippinus was the first of the Romans to keep wild animals enclosed; that he established his preserves shortly before the Civil Wars, and that he soon had imitators.

¹⁵² Reading * * * * [Transcriber’s note: the preceding four *s are actually four instances of the “infinity” symbol (like a digit 8 rotated horizontally)*passum*. The Roman mile, *mille passuum*, was 142 yards less than the English mile.]

¹⁵³ Of the three kinds of hares mentioned by Varro the “common Italian kind” was *L. timidus*, a roast shoulder of which Horace vaunts as a delicacy: the Alpine hare was *L. variabilis*, which grows white on the approach of winter: and the *cuniculus* was the common rabbit known to our English ancestors as the coney. Strabo records (Casaub., 144) that the inhabitants of the Gymnesian (Balearic) Islands in Spain sent a deputation to Augustus to request a military force to exterminate the pest of rabbits, for such was their multitude that the people were being crowded out of their homes by them, in which their plight was that of

modern Australia. They were usually hunted in Spain with muzzled ferrets imported from Africa.

¹⁵⁴ The edible snail, *helix pomatia*, L., is still an article of commerce in France and Italy. They prey upon vines and give evidence of their appreciation of the best by abounding in the vineyards of the *Cote d'or*, the ancient Burgundy. There at the end of summer they are gathered for the double purpose of protecting the vines and delighting the epicure: are then stored in a safe place until cold weather, when they considerably seal up their own shells with a calcareous secretion and so are shipped to market.

Here is the recipe for 'escargots à la bourguignonne,' which despite the prejudice engendered by *Leviticus* (XI, 30.) may be recommended to the American palate jaded by beefsteak and potatoes and the high cost of living: "Mettre les escargots a bouillir pendant 5 a 10 minutes dans de l'eau salée, les retirer de leur coquille, les laver a l'eau froide pour les debarrasser du limon, les cuire dans un court-bouillon fortement assaisonné. Apres cuisson les replacer dans le coquille bien nettooyee, en les garnissant au fond et par dessus d'une farce de beurre frais manipule avec un fin hachis de persil, cerfeuil, ail, echalote, sel et poivre. Avant de servir, faire chauffer au four."

¹⁵⁵ Reading LXXX *quadrantes*. A comparison may be made of this capacity with that of the ordinary snail known to the Romans, for their smallest unit of liquid measure was called a *cochlear*, or snail shell, and contained.02 of a modern pint, or, as we may say, a spoonful: indeed the French word *cuiller* is derived from *cochlear*.

¹⁵⁶ It is perhaps well to remind the American reader that the European dormouse (*Myoxus glis*. Fr. *loir*. Ger. *siebenschlaffer*) is rather a squirrel than a mouse, and that he is still esteemed a dainty edible, as he was by the Romans: indeed when fat, just before he retires to hibernate, he might be preferred to 'possum and other strange dishes on which some hospitable Americans regale themselves and the patient palates of touring Presidents. In his treatise *De re culinaria* Apicius gives a recipe for a ragout of dormice which sounds appetizing.

¹⁵⁷ Darwin (*Animals and Plants*, XVIII) says: "I have never heard of the dormouse breeding in captivity."

¹⁵⁸ Varro makes no mention of tea and bread and butter as part of the diet of a dormouse; so we are better able to understand his abstinence at the mad tea party in *Alice in Wonderland*. As Martial (III, 58) calls him *somniculosus*, it is probable that his table manners on that occasion were nothing new and that his English and German names were always justified.

¹⁵⁹ This is one of Varro's puns which requires a surgical operation to get it into one's head. Appius is selected to talk about bees because his name has some echo of the sound of *apis*, the word for bee.

¹⁶⁰ The study of bees was as interesting to the ancients as it is to us. There have survived from among many others the treatises of Aristotle, Varro, Virgil, Columella and Pliny, but they are all made up, as Maeterlinck has remarked, of "erreurs charmantes," and for that reason the antique lore of bees is read perhaps to best advantage in the mellifluous verses of the fourth *Georgic*, which follow Varro closely.

¹⁶¹ He might have said also that the hexagonal form of construction employed by bees produces the largest possible result with the least labour and material. Maeterlinck rehearses

(*La Vie des Abeilles*, 138) the result of the study of this problem in the highest mathematics:

“Réaumur avait proposé au célèbre mathématicien Koenig le problème suivant: ‘Entre toutes les cellules hexagonales au fond pyramidal composées de trois rhombes semblables et égaux, déterminer celle qui peut être construite avec le moins de matière?’ Koenig trouva qu’une telle cellule avait son fond fait de trois rhombes dont chaque grand angle était de 109 degrés, 26 minutes et chaque petit de 70 degrés, 34 minutes. Or, un autre savant, Maraldi, ayant mesuré aussi exactement que possible les angles des rhombes construits par les abeilles fixa les grands à 109 degrés, 28 minutes, et les petits à 70 degrés, 32 minutes. Il n’y avait donc, entre les deux solutions qu’une différence de 2 minutes. Il est probable que l’erreur, s’il y en a une, doit être imputée à Maraldi plutôt qu’aux abeilles, car aucun instrument ne permet de mesurer avec une précision infaillible les angles des cellules qui ne sont pas assez nettement définies.”

Maclaurin, a Scotch physicist, checked Koenig’s computations and reported to the Royal Society in London in 1743 that he found a solution in exact accord with Maraldi’s measurements, thereby completely justifying the mathematics of the bee architect.

¹⁶² The Romans were as curious and as constant in the use of perfumes as we are of tobacco. It is perhaps well to remember that they might find our smoke as offensive as we would their unguents.

¹⁶³ Indeed one of the marvels of nature is the service which certain bees perform for certain plants in transferring their fertilizing pollen which has no other means of transportation. Darwin is most interesting on this subject.

¹⁶⁴ The ancients, even Aristotle, did not know that the queen bee is the common mother of the hive. They called her the king, and it remained for Swammerdam in the seventeenth century to determine with the microscope this important fact. From that discovery has developed our modern knowledge of the bee; that the drones are the males and are suffered by the (normally) sterile workers to live only until one of them has performed his office of fertilizing once for all the new queen in that nuptial flight, so dramatically fatal to the successful swain, which Maeterlinck has described with wonderful rhetoric, whereupon the workers massacre the surviving males without mercy. This is the “driving out” which Varro mentions.

¹⁶⁵ This picture of the queen bee is hardly in accord with modern observations. It seems that while the queen is treated with the utmost respect, she is rather a royal prisoner than a ruler, and, after her nuptial flight, is confined to her function of laying eggs incessantly unless she may be unwillingly dragged forth to lead a swarm. Maeterlinck thus pictures (*La Vie des Abeilles*, 174) her existence with a Gallic pencil:

“Elle n’aura aucune des habitudes, aucunes des passions que nous croyons inhérentes à l’abeille. Elle n’éprouvera ni le désir du soleil, ni le besoin de l’espace et mourra sans avoir visité une fleur. Elle passera son existence dans l’ombre et l’agitation de la foule à la recherche infatigable de berceaux à peupler. En revanche, elle connaîtra seule l’inquiétude de l’amour.”

¹⁶⁶ It would have interested Axius to know that the annual consumption of honey in the United States today is from 100 to 125 million pounds and that the crop has a money value of at least ten million dollars. To match Seius, we might put forward a bee farmer in California who produces annually 150,000 pounds of honey from 2,000 hives.

¹⁶⁷ Maeterlinck has made a charming picture of this habit of propinquity of the bee-stand to the human habitation. He describes (*La Vie des Abeilles*, 14) the old man who taught him to love bees when he was a boy in Flanders, an old man whose entire happiness “consistait aux beautés d’un jardin et parmi ces beautés la mieux aimée et la plus visitée était un rucher, composé de douze cloches de paille qu’il avait peint, les unes de rose vif, les autres de jaune clair, la plupart d’un bleu tendre, car il avait observé, bien avant les expériences de Sir John Lubbock, que le bleu est la couleur préférée des abeilles. Il avait installé ce rucher contre le mur blanchi de la maison, dans l’angle que formait une des ces savoureuses et fraîches cuisines hollondaises aux dressoirs de faïence où étincelaient les étains et les cuivres qui, par la porte ouverte, se reflétaient dans un canal paisible. Et l’eau chargée d’images familières, sous un rideau de peupliers, guidait les regards jusqu’au repos d’un horizon de moulins et de prés.”

¹⁶⁸ Reading *Apiastro*. This is the *Melissa officinalis* of Linnaeus. Cf. Pliny, XX, 45 and XXI, 86.

¹⁶⁹ Bee keepers attribute to Reaumur the invention of the modern glass observation hive, which has made possible so much of our knowledge of the bee, but it may be noted that Pliny (*H.N.* XXI, 47) mentions hives of “*lapis specularis*,” some sort of talc, contrived for the purpose of observing bees at work. The great advance in bee hives is, however, the sectional construction attributed to Langstroth and developed in America by Root.

¹⁷⁰ Columella, (IX, 14) referring to the myth of the generation of bees in the carcase of an ox (out of which Virgil made the fable of the pastor Aristaeus in the Fourth Georgic), explains the practice mentioned in the text with the statement “*hic enim quasi quadam cognatione generis maxime est apibus aptus*.” The plastering of wicker hives with ox dung persisted and is recommended in the seventeenth century editions of the *Maison Rustique*.

¹⁷¹ Reading *seditiosum*.

¹⁷² This is a mistake upon which Aristotle could have corrected Varro.

¹⁷³ After studying the commentators on this obscure passage, I have elected to follow the emendation of Ursinus, which, although Keil sneers at its license, has the advantage of making sense.

¹⁷⁴ *Sinapis arvensis*, Linn.

¹⁷⁵ *Sium sisarum*, Linn.

¹⁷⁶ The philosophy of the bee is not as selfish as that human principle which Varro attributes to them. The hive does not send forth its “youth” to found a colony, but, on the contrary, abandons its home and its accumulated store of wealth to its youth and itself ventures forth under the leadership of the old queen to face the uncertainties of the future, leaving only a small band of old bees to guard the hive and rear the young until the new queen shall have supplied a new population.

¹⁷⁷ Reading *imbecilliores*.

¹⁷⁸ Pliny (*H.N.* IX, 81) relates that this loan was made to supply the banquet on the occasion of one of the triumphs of Caesar the dictator, but Pliny puts the loan at six thousand fishes.

¹⁷⁹ It is impossible to translate this pun into English, *dulcis* being the equivalent of both “fresh” and “agreeable,” and *amara* of “salt” and “disagreeable.” A French translator would have at his command *doux* and *amer*.

¹⁸⁰ Cf. Pliny (*H.N.* II, 96): “In Lydia the islands called Calaminae are not only driven about by the wind, but may even be pushed at pleasure from place to place, by which means many people saved themselves in the Mithridatic war. There are some small islands in the Nymphaeus called the Dancers, because, when choruses are sung, they move in tune with the measure of the music.”

¹⁸¹ Reading *in ius vocare*, with the *double entendre* of service in a sauce and bringing to justice.

ON THE LATIN LANGUAGE

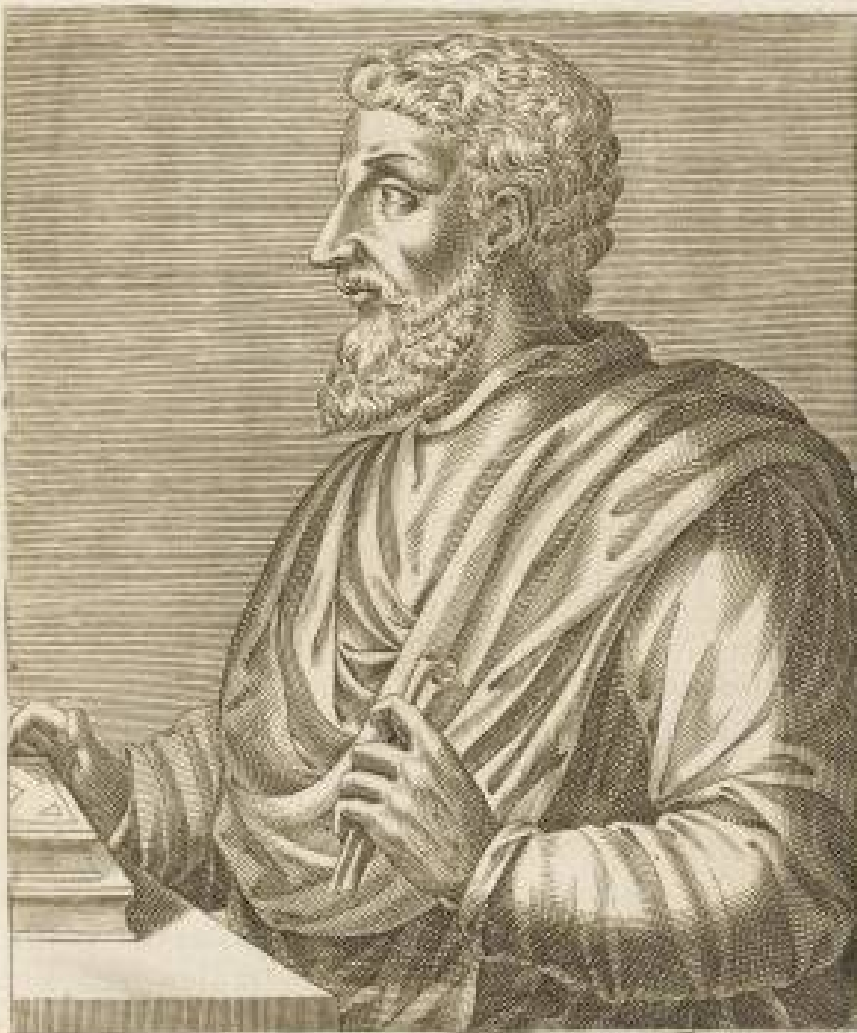


Translated by Roland G. Kent

Varro's *De lingua latina libri* (On the Latin Language) was originally formed of 25 Books, of which six books (V–X) survive, though partly mutilated. It is believed the complete work was a monumental achievement of scholarship, typical of the author's interest not only in antiquarian matters but also in the collection of scientific facts. The text consisted of three parts: etymology of Latin words (I–VII); their inflexions and other changes (VIII–XIII); and syntax (XIV–XXV). The extant text includes a section applying to the etymology of words of time and place and poetic expressions (V–VI). There also remains a section on analogy as it occurs in word formation (VII–IX) and a section concerning analogy to word derivation (X–XII). The book, in spite of its fragmentary state, is an invaluable resource for information on the study and origin of the Latin language, offering a rare insight into the application of Roman antiquarian studies.

MARC TERENCE VARRON.

Chap. 126.



An eighteenth century imagined portrait of an elderly Varro by an unknown artist

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BOOK V

1. In what way names were applied to things in Latin, I have undertaken to expound, in six books. Of these, I have already composed three before this one, and have addressed them to Septumius; in them I treat of the branch of learning which is called Etymology. The considerations which might be raised against it, I have put in the first book; those adduced in its favour, in the second; those merely describing it, in the third. In the following books, addressed to you, I shall discuss the problem from what things names were applied in Latin, both those which are habitual with the ordinary folk, and those which are found in the poets.

2. Inasmuch as each and every word has two innate features, from what thing and to what thing the name is applied (therefore, when the question is raised from what thing *pertinacia* 'obstinacy' is, it is shown to be from *pertendere* 'to persist': to what thing it is applied, is told when it is explained that it is *pertinacia* 'obstinacy' in a matter in which there ought not to be persistence but there is, because it is *perseverantia* 'steadfastness' if a person persists in that in which he ought to hold firm), that former part, where they examine why and whence words are, the Greeks call Etymology, that other part they call Semantics. Of these two matters I shall speak in the following books, not keeping them apart, but giving less attention to the second.

3. These relations are often rather obscure for the following reasons: Not every word that has been applied, still exists, because lapse of time has blotted out some. Not every word that is in use, has been applied without inaccuracy of some kind, nor does every word which has been applied correctly remain as it originally was; for many words are disguised by change of the letters. There are some whose origin is not from native words of our own language. Many words indicate one thing now, but formerly meant something else, as is the case with *hostis* 'enemy': for in olden times by this word they meant a foreigner from a country independent of Roman laws, but now they give the name to him whom they then called *perduellis* 'enemy.'

4. I shall take as starting-point of my discussion that derivative or case-form of the words in which the origin can be more clearly seen. It is evident that we ought to operate in this way, because when we say *inpos* 'lacking power' in the nominative, it is less clear that it is from *potentia* 'power' than when we say *inpotem* in the accusative; and it becomes the more obscure, if you say *pos* 'having power' rather than *inpos*; for *pos* seems to mean rather *pons* 'bridge' than *potens* 'powerful.'

5. There are few things which lapse of time does not distort, there are many which it removes. Whom you saw beautiful as a boy, him you see unsightly in his old age. The third generation does not see a person such as the first generation saw him. Therefore those things that oblivion has taken away even from our ancestors, the painstaking of Mucius and Brutus, though it has

pursued the runaways, cannot bring back. As for me, even if I cannot track them down, I shall not be the slower for this, but even for this I shall be the swifter in the chase, if I can. For there is no slight darkness in the wood where these things are to be caught, and there are no trodden paths to the place which we wish to attain, nor do there fail to be obstacles in the paths, which could hold back the hunter on his way.

6. Now he who has observed in how many ways the changing has taken place in those words, new and old, in which there is any and every manner of variation in popular usage, will find the examination of the origin of the words an easier task; for he will find that words have been changed, as I have shown in the preceding books, essentially on account of two sets of four causes. For the alterations come about by the loss or the addition of single letters and on account of the transposition or the change of them, and likewise by the lengthening or the shortening of syllables, and their addition or loss: since I have adequately shown by examples, in the preceding books, of what sort these phenomena are, I have thought that here I need only set a reminder of that previous discussion.

7. Now I shall set forth the origins of the individual words, of which there are four levels of explanation. The lowest is that to which even the common folk has come; who does not see the sources of *argentifodinae* ‘silver-mines’ and of *viocurus* ‘road-overseer’? The second is that to which old-time grammar has mounted, which shows how the poet has made each word which he has fashioned and derived. Here belongs Pacuvius’s

The whistling of the ropes,
here his
Incurvate-neckèd flock,
here his
With his mantle he beshields his arm.

8. The third level is that to which philosophy ascended, and on arrival began to reveal the nature of those words which are in common use, as, for example, from what *oppidum* ‘town’ was named, and *vicas* ‘row of houses,’ and via ‘street.’ The fourth is that where the sanctuary is, and the mysteries of the high-priest: if I shall not arrive at full knowledge there, at any rate I shall cast about for a conjecture, which even in matters of our health the physician sometimes does when we are ill.

From this meaning, either an entire small ‘village’ or a ‘street’ in a large city. 9. But if I have not reached the highest level, I shall none the less go farther up than the second, because I have studied not only by the lamp of Aristophanes, but also by that of Cleanthes. I have desired to go farther than those who expound only how the words of the poets are made up. For it did not seem meet that I seek the source in the case of the word which Ennius had made, and neglect that which long before King Latinus had made, in view of

the fact that I get pleasure rather than utility from many words of the poets, and more utility than pleasure from the ancient words. And in fact are not those words mine which have come to me by inheritance from King Romulus, rather than those which were left behind by the poet Livius?

10. Therefore since words are divided into these three groups, those which are our own, those which are of foreign origin, and those which are obsolete and of forgotten sources, I shall set forth about our own why they are, about those of foreign origin whence they are, and as to the obsolete I shall let them alone: except that concerning some of them I shall none the less write what I have found or myself conjecture. In this book I shall tell about the words denoting places and those things which are in them; in the following book I shall tell of the words denoting times and those things which take place in them; in the third I shall tell of both these as expressed by the poets.

11. Pythagoras the Samian says that the primal elements of all things are in pairs, as finite and infinite, good and bad, life and death, day and night. Therefore likewise there are the two fundamentals, station and motion, each divided into four kinds: what is stationary or is in motion, is body; where it is in motion, is place; while it is in motion, is time; what is inherent in the motion, is action. The fourfold division will be clearer in this way: body is, so to speak, the runner, place is the race-course where he runs, time is the period during which he runs, action is the running.

12. Therefore it comes about that for this reason all things, in general, are divided into four phases, and these universal; because there is never time without there being motion — for even an intermission of motion is time — ; nor is there motion where there is not place and body, because the latter is that which is moved, and the former is where; nor where this motion is, does there fail to be action. Therefore place and body, time and action are the four-horse team of the elements.

13. Therefore because the primal classes of things are four in number, so many are the primal classes of words. From among these, concerning places and those things which are seen in them, I shall put a summary account in this book; but we shall follow them up wherever the kin of the word under discussion is, even if it has driven its roots beyond its own territory. For often the roots of a tree which is close to the line of the property have gone out under the neighbour's cornfield. Wherefore, when I speak of places, I shall not have gone astray, if from ager 'field' I pass to an agrarius 'agrarian' man, and to an agricola 'farmer.' The partnership of words is one of many members: the Wine Festival cannot be set on its way without wine, nor can the Curia Calabra 'Announcement Hall' be opened without the calatio 'proclamation.'

14. Among places, I shall begin with the origin of the word locus 'place' itself. Locus is where something can be locatum 'placed,' or as they say nowadays, collocatum 'established.' That the ancients were wont to use the word in this meaning, is clear in Plautus:

I have a grown-up daughter, lacking dower, unplaceable, Nor can I place her now with anyone.

In Ennius we find:

Thracian Land, where Bacchus' fane renowned Did Maro place.

15. Where anything comes to a standstill, is a locus 'place.' From this the auctioneer is said locare 'to place' because he is all the time likewise going on until the price comes to a standstill on someone. Thence also is locarium 'place-rent,' which is given for a lodging or a shop, where the payers take their stand. So also loci muliebres 'woman's places,' where the beginnings of birth are situated.

16. The primal places of the universe, according to the ancient division, are two, terra 'earth' and caelum 'sky,' and then, according to the division into items, there are many places in each. The places of the sky are called loca supra 'upper places,' and these belong to the gods; the places of the earth are loca infera 'lower places,' and these belong to mankind. Caelum 'sky' is used in two ways, just as is Asia. For Asia means the Asia, which is not Europe, wherein is even Syria; and Asia means also that part of the aforementioned Asia, in which is Ionia and our province.

17. So caelum 'sky' is both a part of itself, the top where the stars are, and that which Pacuvius means when he points it out:

See this around and above, which holds in its embrace The earth.

To which he adds:

That which the men of our days call the sky.

From this division into two, Lucilius set this as the start of his twenty-one books:

Seeking the time when the ether above and the earth were created.

18. Caelum, Aelius writes, was so called because it is caelatum 'raised above the surface,' or from the opposite of its idea, celatum 'hidden' because it is exposed; not ill the remark, that the one who applied the term took caelare 'to raise' much rather from caelum than caelum from caelare. But that second origin, from celare 'to hide,' could be said from this fact, that by day it celatur 'is hidden,' no less than that by night it is not hidden.

19. On the whole I rather think that from chaos came chorum and then cavum 'hollow,' and from this caelum 'sky,' since, as I have said, "this around and above, which holds in its embrace the earth," is the cavum caelum 'hollow sky.' And so Andromeda says to Night,

You who traverse the hollows of sky

With your chariot marked by the stars.
And Agamemnon says,
In the shield of the sky, that soundeth on high,
for a shield is a hollow thing.

And Ennius likewise, with reference to a cavern,

Enormous arches of the sky.

20. Wherefore as from *cavum* 'hollow' come *cavea* 'cavity,' and *caullae* 'hole or passage,' and *convallis* 'enclosed valley' as being a *cavata vallis* 'hollowed valley,' and *cavernae* 'caverns' from the *cavatio* 'hollowing,' as a *cavum* 'hollow thing,' so developed *caelum* 'sky' from *cavum*, which itself was from chaos, from which, in Hesiod, come all things.

21. *Terra* 'earth' is — as Aelius writes — named from this fact, that it *teritur* 'is trodden'; therefore it is written *tera* in the Books of the Augurs, with one R. From this, the place which is left near a town as common property for the farmers, is the *territorium* 'territory,' because it *teritur* 'is trodden' most. From this, the linen garment which *teritur* 'is rubbed' by the body, is an *extermamentarium*. From this, in the harvest, is the *tritura* 'threshing,' because then the grain *teritur* 'is rubbed out,' and the *tribulum* 'threshing-sledge,' with which it *teritur* 'is rubbed out.' From this the boundaries of the fields are called *termini*, because those parts *teruntur* 'are trodden' most, on account of the boundary-lane. Therefore this word is pronounced with I in some places in Latium, not *terminus*, but *terimen*, and this form is found in Accius: it is the same word which the Greeks call *τέρμων*. Perhaps the Latin word comes from the Greek; for Evander, who came to the Palatine, was an Arcadian from Greece.

22. A *via* 'road' is indeed an *iter* 'way,' because it *teritur* 'is worn down' by *vehendo* 'carrying in wagons'; an *actus* 'driving-passage' is likewise an *iter*, because it is worn down by *agendo* 'driving of cattle.' Moreover an *ambitus* 'edge-road' is an *iter* 'way,' because it *teritur* 'is worn' by the going around: for an edge-road is a circuit; from this the interpreters of the Twelve Tables define the *ambitus* of the wall as its circuit. Therefore *tera*, *terra*; and from this the poets have called the surface of the earth, which *sola* 'alone' can be trod, the *sola* 'soil' of the earth.

23. *Humus* 'soil' is, as they think, the same as *terra* 'earth'; therefore, they say, Ennius meant men falling to the earth when he said,

With their elbows the soil they were smiting.

And because *humus* 'soil' is *terra* 'earth,' therefore he who is dead and covered with *terra* is *humatus* 'inhumed.' From this fact, if on the burial-mound of a Roman who has been burned on the pyre clods are not thrown, or

if a bone of the dead man has been kept out for the ceremony of purifying the household, the household remains in mourning; in the latter case, until in the purification the bone is covered with humus — as the pontifices say, as long as he is in-humatus mot inhumed.’ Also he is called humilior ‘more humble,’ who is more downcast toward the humus; the lowest is said to be humillimus ‘most humble,’ because the humus is the lowest thing in the world.

24. From this comes also humor ‘moisture.’ So therefore Lucilius says:

Gone is the earth, disappeared into clouds and moisture.

Pacuvius says:

The land exhales a breeze and dawning damp; humida, the same as humecta ‘damp.’ From this, a marshy field is humidissimus ‘most damp’; from this, udus and uvidus ‘damp’; from this, sudor ‘sweat’ and udor ‘dampness.’

25. If this moisture is in the ground no matter how far down, in a place from which it pote ‘can’ be taken, it is a puteus ‘well’; unless rather because the Aeolians used to say, like πύταμος for ποταμός ‘river,’ so also πύτεος ‘well’ for ποτέος ‘drinkable,’ from potus ‘act of drinking,’ and not φρέαρ ‘well’ as they do now. From putei ‘well’ comes the town-name, such as Puteoli, because around this place there are many hot and cold spring-waters; unless rather from putor ‘stench,’ because the place is often putidus ‘stinking’ with smells of sulphur and alum. Outside the towns there are puticuli ‘little pits,’ named from putei ‘pits,’ because there the people used to be buried in putei ‘pits’; unless rather, as Aelius writes, the puticuli are so called because the corpses which had been thrown out putescabant ‘used to rot’ there, in the public burial-place which is beyond the Esquiline. This place Afranius in a comedy of Roman life calls the Putiluci ‘pit-lights,’ for the reason that from it they look up through putei ‘pits’ to the lumen ‘light.’

26. A lacus ‘lake’ is a large lacuna ‘hollow,’ where water can be confined. A palus ‘swamp’ is a paululum ‘small amount’ of water as to depth, but spread quite widely palam ‘in plain sight.’ A stagnum ‘pool’ is from Greek, because they gave the name στεγνός ‘waterproof’ to that which has no fissure. From this, at farmhouses the stagna ‘pools’ are round, because a round shape most easily holds water in, but corners are extremely troublesome.

27. Fluvius ‘river’ is so named because it fluit ‘flows,’ and likewise flumen ‘river’: from which is written, according to the law of city estates, Stillicidia ‘rain-waters’ and flumina ‘rivers’ shall be allowed to fall and to flow without interference.

Between these there is this difference, that stillicidium ‘rain-water’ is so named because it cadit ‘falls’ stillatim ‘drop by drop,’ and flumen ‘river’ because it fluit ‘flows’ uninterruptedly.

28. An amnis is that river which goes around something; for amnis is named from ambitus ‘circuit.’ From this, those who dwell around the Aternus are called Amiternini ‘men of Amiternum.’ From this, he who circum it ‘goes around’ the people as a candidate, ambit ‘canvasses,’ and he who does

otherwise than he should, pleads his case in court as a result of his investigable ambitus 'canvassing.' Therefore the Tiber is called an amnis, because it ambit 'goes around' the Campus Martius and the City; the town Interamna gets its name from its position inter amnis 'between rivers'; likewise Antemnae, because it lies ante amnis 'in front of the rivers,' where the Anio flows into the Tiber — a town which suffered in war and wasted away until it perished.

29. The Tiber, because its source is outside Latium, if the name as well flows forth from there into our language, does not concern the Latin etymologist; just as the Volturnus, because it starts from Samnium, has nothing to do with the Latin language; but because the nearest town to it along the sea is Volturnum, it has come to us and is now a Latin name, as also the name Tiberinus. For we have both a colony named Volturnum and a god named Tiberinus.

30. But about the name of the Tiber there are two accounts. For Etruria believes it is hers, and so does Latium, because there have been those who said that at first, from Thebris, the near-by chieftain of the Veians, it was called the Thebris. There are also those who in their writings have handed down the story that the Tiber was called Albula as its early Latin name, and that later it was changed on account of Tiberinus king of the Latins, because he died there; for, as they relate, it was his burial-place.

31. As all natura is divided into sky and earth, so with reference to the regions of the sky the earth is divided into Asia and Europe. For Asia is that part which lies toward the noonday sun and the south wind, Europe that which lies toward the Wain and the north wind. Asia was named from the nymph who, according to tradition, bore Prometheus to Iapetus. Europe was named from Europa the daughter of Agenor, who, Manlius writes, was carried off from Phoenicia by the Bull; a remarkable bronze group of the two was made by Pythagoras at Tarentum.

32. The various localities of Europe are inhabited by many different nations. They are in general denominated by names transferred from the men, like Sabini 'the Sabine country,' and Lucani 'the country of the Lucanians,' or derived from the names of the men, like Apulia and Latium, or both, like Etruria and Tusci. Where Latinus once had his kingdom, the field-lands as a whole are called Latian; but when taken piecemeal, they are named after the towns, as Praenestine from Praeneste, and Arician from Aricia.

33. As our State Augurs set forth, there are five kinds of fields: Roman, Gabine, peregrine, hostic, uncertain. 'Roman' field-land is so called from Romulus, from whom Rome got its name. 'Gabine' is named from the town Gabii. The 'peregrine' is field-land won in war and reduced to peace, which is apart from the Roman and the Gabine, because in these latter the auspices are observed in one uniform manner: 'peregrine' is named from pergere 'to go ahead,' that is, from progredi 'to advance'; for into it their first advance was made out of the Roman field-land. By the same reasoning, the Gabine also is

peregrine, but because it has auspices of its own special sort it is held separate from the rest. 'Hostic' is named from the hostes 'enemies.' 'Uncertain' field-land is that of which it is not known to which of these four classes it belongs.

34. Ager 'field' is the name given to land into which they used agere 'to drive' something, or from which they used to drive something, for the sake of the produce; but others say that it is because the Greeks call it ἀγρός. As an ager 'field' is that to which driving can be done, so that whereby driving can be done is an actus 'driveway.' Its least limit is set at four feet in width — four perhaps from the fact that by it a four-footed animal is driven — and one hundred and twenty feet in length. For a square actus, both in breadth and in length, the limit would be one hundred and twenty feet. There are many things which the ancients delimited with a multiple of twelve, like the actus of twelve ten-foot measures.

35. A iugerum is the name given to two square actus, iuncti 'joined' together. A centuria 'century' was named originally from centum 'one hundred' iugera, and later, when doubled, kept its name, just as the tribus 'tribes,' which got their name from the three parts into which the people were divided, still keep the same name though their number has been multiplied. As where they agebant 'drove' were actus 'driveways,' so where they vehebant 'transported' were viae 'highways'; whither they convehebant 'transported' their produce were villae 'farmhouses.' Whereby they went, they called an iter 'road' from itus 'going'; where the going was narrow, was a semita 'by-path,' as though it were called a semiter 'half-road.'

36. Ager cultus 'cultivated field-land' is so named from the fact that there the seeds coalescebant 'united' with the land, and where it is not consitus 'sown' it is called incultus 'uncultivated.' Because they first used capere 'to take' the products from the level field-land, it was called campus 'plain'; after they began to till the adjacent higher places, they called them colles 'hills' from colere 'to till.' The fields which they did not till on account of woods or that kind where flocks can be grazed, but still they took them for private use, they called saltus 'woodland-pastures' from the fact that their use was salvus 'saved.' These moreover the Greeks call νέμη 'glades' and we call nemora 'groves.'

37. Field-land, because it seemed to be the fundamentum 'foundation' of animal flocks and of money, was called fundus 'estate,' or else because it fundit 'pours out' many things every year. Vineta and vineae 'vineyards,' from the many vites 'grape-vines.' Vitis 'grapevine' from vinum 'wine,' this from vis 'strength'; from this, vindemia 'vintage,' because it is vinidemia 'wine-removal' or vitidemia 'vine-removal.' Seges 'standing grain' from satus 'sowing,' that is, semen 'seed.' Semen 'seed,' because it is not completely that which comes from it; from this, seminaria 'nursery-gardens,' sementes 'sowings,' and likewise other words. What the segetes 'fields of grain' feruni 'bear,' are fruges 'field-produce'; from frui 'to enjoy' comes fructus 'fruits'; from spes 'hope' comes spicae 'ears of grain,' where are also

the culmi 'grain-stalks,' because they grow on the top of the plain, and a top is a culmen.

38. Where the cut grain-sheaves arescunt 'dry out' for threshing, is an area 'threshing-floor.' On account of the likeness to these, clean places in the city are called areae; from which may be also the Gods' ara 'altar,' because it is clean — unless rather from ardor 'fire'; for the intention of using it for an ardor makes it an ara; and from this the area itself is not far away, because it is the ardor of the sun which arefacit 'does the drying.'

39. Ager restibilis 'land that withstands use' is that which restituitur 'is restored' and replanted yearly; on the other hand, that which receives an intermission is called novalis ager 'renewable field-land,' from novare 'to renew.' Arvus 'ploughable' and arationes 'ploughings,' from arare 'to plough'; from this, what the ploughshare sustulit 'has removed' is a sulcus 'furrow'; whither that earth is thrown, that is, proiecta 'thrown forth,' is the porca 'ridge.'

40. Prata 'meadows' are named from this, that they are parata 'prepared' without labour. Rura 'country-lands' are so called because in the fields the same operations must be done every year rursum 'again,' that you may again get their fruits. Sulpicius writes, however, that it is a just right for the country-lands of the populace to be divided for lavish distribution as bonus to discharged soldiers. Praedia 'estates' are named, as also praedes 'bondsmen,' praedes), a compound of prae + vas 'guarantor'; praestare has the same prefix, but a different root. from praestare 'to offer as security,' because these, when given as pledge to the official authorities, praestent 'guarantee' the good faith of the party in the case.

41. Where Rome now is, was called the Septimontium from the same number of hills which the City afterwards embraced within its walls; of which the Capitoline got its name because here, it is said, when the foundations of the temple of Jupiter were being dug, a human caput 'head' was found. This hill was previously called the Tarpeian, from the Vestal Virgin Tarpeia, who was there killed by the Sabines with their shields and buried; of her name a reminder is left, that even now its cliff is called the Tarpeian Rock.

42. This hill was previously called the Saturnian Hill, we are informed by the writers, and from this Latium has been called the Saturnian Land, as in fact Ennius calls it. It is recorded that on this hill was an old town, named Saturnia. Even now there remain three evidences of it: that there is a temple of Saturn by the passage leading to the hill; that there is a Saturnian gate which Junius writes of as there, which they now call Pandana; that behind the temple of Saturn, in the laws for the buildings of private persons, the back walls of the houses are mentioned as "Saturnian walls."

43. The name of the Aventine is referred to several origins. Naevius says that it is from the aves 'birds,' because the birds went thither from the Tiber; others, that it is from King Aventinus the Alban, because he is buried there; others that it is the Adventine Hill, from the adventus 'coming' of people,

because there a temple of Diana was established in which all the Latins had rights in common. I am decidedly of the opinion, that it is from *advectus* 'transport by water'; for of old the hill was cut off from everything else by swampy pools and streams. Therefore they *advehebantur* 'were conveyed' thither by rafts; and traces of this survive, in that the way by which they were then transported is now called *Velabrum* 'ferry,' and the place from which they landed at the bottom of New Street is a chapel of the *Velabra*.

44. *Velabrum* is from *vehere* 'to convey.' Even now, those persons are said to do *velatura* 'ferrying,' who do this for pay. The *merces* 'pay' (so called from *merere* 'to earn' and *aes* 'copper money') for this ferrying of those who crossed by rafts was a farthing. From this *Lucilius* wrote:

Of a raft-markèd farthing.^d 45. The remaining localities of the City were long ago divided off, when the twenty-seven shrines of the *Argei* were distributed among the four sections of the City. The *Argei*, they think, were named from the chieftains who came to Rome with *Hercules* the *Argive*, and settled down in *Saturnia*. Of these sections, the first is recorded as the *Suburan* region, the second the *Esquiline*, the third the *Colline*, the fourth the *Palatine*.

46. In the section of the *Suburan* region, the first shrine is located on the *Caelian* Hill, named from *Caeles Vibenna*, a *Tuscan* leader of distinction, who is said to have come with his followers to help *Romulus* against King *Tatius*. From this hill the followers of *Caeles* are said, after his death, to have been brought down into the level ground, because they were in possession of a location which was too strongly fortified and their loyalty was somewhat under suspicion. From them was named the *Vicus Tuscus* 'Tuscan Row,' and therefore, they say, the statue of *Vertumnus* stands there, because he is the chief god of *Etruria*; but those of the *Caelians* who were free from suspicion were removed to that place which is called *Caeliolum* 'the little *Caelian*.'

47. Joined to the *Caelian* is *Carinae* 'the Keels'; and between them is the place which is called *Caeriolensis*, obviously because the fourth shrine of the first region is thus written in the records:

Caeriolensis: fourth shrine, near the temple of *Minerva*, in the street by which you go up the *Caelian* Hill; it is in a booth.

Caeriolensis is so called from the joining of the *Carinae* with the *Caelian*. *Carinae* is perhaps from *caerimonia* 'ceremony,' because from here starts the beginning of the *Sacred Way*, which extends from the Chapel of *Strenia* to the citadel, by which the offerings are brought every year to the citadel, and by which the augurs regularly set out from the citadel for the observation of the birds. Of this *Sacred Way*, this is the only part commonly known, namely the part which is at the beginning of the Ascent as you go from the *Forum*.

48. To the same region is assigned the *Subura*, which is beneath the earth-wall of the *Carinae*; in it is the sixth chapel of the *Argei*. *Junius* writes that *Subura* is so named because it was at the foot of the old city (*sub urbe*); proof of which may be in the fact that it is under that place which is called the earth-wall. But I rather think that from the *Succusan* district it was called *Succusa*;

for even now when abbreviated it is written SVC, with C and not B as third *lus*, *Parilia* for *Palilia*; possibly association with *Carinae* furthered the change. Etymology entirely uncertain. The neuters *quod* and *in eo*, referring to *Subura*, mutually support each other. letter. The *Succusan* district is so named because it *succurrit* 'runs up to' the *Carinae*.

49. To the second region belongs the *Esquiline*. Some say that this was named from the king's *excubiae* 'watch-posts,' others that it was from the fact that it was planted with *aesculi* 'oaks' by King *Tullius*. With this second origin the near-by places agree better, because in that locality there is the so-called *Beech Grove*, and the chapel of the *Oak-Grove Lares*, and the *Grove of Mentis* and of *Juno Lucina* — whose territories are narrow. And it is not astonishing; for now this long while, far and wide, *Greed* has been the one and only mistress.

50. The *Esquiline* includes two hills, inasmuch as the *Oppian* part and the *Cespian* part of the hill are called by their own old names even now, in the sacrifices. In the *Sacrifices of the Argei* there is the following record:

Oppian Hill: first shrine, on the *Esquiline*, beyond the *Beech Grove*; it is on the left side of the street along the wall.

Oppian Hill: third shrine, this side of the *Esquiline Grove*; it is in a booth on the right-hand side of the street.

Oppian Hill: fourth shrine, this side of the *Esquiline Grove*; it is on the right-hand side of the street among the potteries. *Cespian Hill*: fifth shrine, this side of the *Poetelian Grove*; it is on the *Esquiline*.

Cespian Hill: sixth shrine, at the temple of *Juno Lucina*, where the sacristan customarily dwells.

51. To the third region belong five hills, named from sanctuaries of gods; among these hills are two that are well-known. The *Viminal Hill* got its name from *Jupiter Viminus* 'of the *Osiers*,' because there was his altar; but there are some who assign its name to the fact that there were *vimineta* 'willow-copses' there. The *Quirinal Hill* was so named because there was the sanctuary of *Quirinus*; others say that it is derived from the *Quirites*, who came with *Tatius* from *Cures* to the vicinity of *Rome*, because there they established their camp.

52. This name has caused the names of the adjacent localities to be forgotten. For that there were other hills with their own names, is clear from the *Sacrifices of the Argei*, in which there is a record to this effect:

Quirinal Hill: third shrine, this side of the temple of *Quirinus*.

Salutary Hill: fourth shrine, opposite the temple of *Apollo*, this side of the temple of *Salus*. *Mucial Hill*: fifth shrine, at the temple of the God of Faith, in the chapel where the sacristan customarily dwells.

Latiary Hill: sixth shrine, at the top of *Insteian Row*, at the augurs' place of observation; it is the only building.

The altars of these gods, from which they have their surnames, are in the various parts of this region.

53. To the fourth region belongs the Palatine, so called because the Pallantes came there with Evander, and they were called also Palatines; others think that it was because Palatines, aboriginal inhabitants of a Reatine district called Palatium, settled there; but others thought that it was from Palanto, wife of Latinus. This same place certain authorities think was named from the pecus 'flocks'; therefore Naevius calls it the Balatium 'Bleat-ine.'

54. To this they joined the Cermalus and the Veliae, because in the account of this region it is thus recorded:

Germalian: fifth shrine, at the temple of Romulus, and Velian: sixth shrine, on the Velia, at the temple of the deified Penates. Germalus, they say, is from the germani 'brothers' Romulus and Remus, because it is beside the Fig-tree of the Suckling, and they were found there, where the Tiber's winter flood had brought them when they had been put out in a basket. For the source of the name Veliae I have found several reasons, among them, that there the shepherds of the Palatine, before the invention of shearing, used to vellere 'pluck' the wool from the sheep, from which the vellera 'fleeces' were named.

55. The Roman field-land was at first divided into tris 'three' parts, from which they called the Titienses, the Ramnes, and the Luceres each a tribus 'tribe.' These tribes were named, as Ennius says, the Titienses from Tattius, the Ramnenses from Romulus, the Luceres, according to Junius, from Lucumo; but all these words are Etruscan, as Volnius, who wrote tragedies in Etruscan, stated.

56. From this, four parts of the City also were used as names of tribes, the Suburan, the Palatine, the Esquiline, the Colline, from the places; a fifth, because it was sub Roma 'beneath the walls of Rome,' was called Romilian; so also the remaining thirty from those causes which I wrote in the Book of the Tribes.

57. I have told what pertains to places and those things which are connected with them; now of these things which are wont to be in places, I shall explain those which deal with immortals and with mortals, in such a way that first I shall tell what pertains to the gods. The first gods were Caelum 'Sky' and Terra 'Earth.' These gods are the same as those who in Egypt are called Serapis and Isis, though Harpocrates with his finger make a sign to me to be silent. The same first gods were in Latium called Saturn and Ops.

58. For Earth and Sky, as the mysteries of the Samothracians teach, are Great Gods, and these whom I have mentioned under many names, are not those Great Gods whom Samothrace represents by two male statues of bronze which she has set up before the city-gates, nor are they, as the populace thinks, the Samothracian gods, who are really Castor and Pollux; but these are a male and a female, these are those whom the Books of the Augurs mention in writing as "potent deities," for what the Samothracians call "powerful gods."

59. These two, Sky and Earth, are a pair like life and body. Earth is a damp cold thing, whether Eggs the flock that is feather-adorned is wont to give birth to, Not to a life, as Ennius says, and Thereafter by providence comes to the

fledglings Life itself, or, as Zeno of Citium says, The seed of animals is that fire which is life and mind.

This warmth is from the Sky, because it has countless undying fires. Therefore Epicharmus, when he is speaking of the human mind, says That is fire taken from the Sun, and likewise of the sun, And it is all composed of mind, just as moistures are composed of cold earth, as I have shown above.

60. United with these, Sky and Earth produced everything from themselves, because by means of them nature Mixes heat with cold, and dryness with the wet.

Pacuvius is right then in saying And heaven adds the life, and Ennius in saying that The body she's given Earth does herself take back, and of loss not a whit does she suffer. Inasmuch as the separation of life and body is the exitus 'way out' for all creatures born, from that comes exitium 'destruction,' just as when they ineunt 'go into' unity, it is their initia 'beginnings.'

61. From this fact, every body, when there is excessive heat or excessive moisture, perishes, or if it survives, is barren. Summer and winter are witnesses to this: in the one the air is blazing hot and the wheat-ears dry up; in the other, nature has no wish to struggle with rain and cold for purposes of birth, and rather waits for spring. Therefore the conditions of procreation are two: fire and water. Thus these are used at the threshold in weddings, because there is union here, and fire is male, which the semen is in the other case, and the water is the female, because the embryo develops from her moisture, and the force that brings their vinctio 'binding' is Venus 'Love.'

62. Hence the comic poet says, Venus is his victress, do you see it?

not because Venus wishes vincere 'to conquer,' but vincire 'to bind.' Victory herself is named from the fact that the overpowered vinciuntur 'are bound.' Poetry bears testimony to both, because both Victory and Venus are called heaven-born; for Tellus 'Earth,' because she was the first one bound to the Sky, is from that called Victory. Therefore she is connected with the corona 'garland' and the palma 'palm,' because the garland is a binder of the head and is itself, from vinctura 'binding,' said vieri 'to be plaited,' that is, vinciri 'to be bound'; whence there is the line in Ennius's Sota:

The lustful pair were going, to plait the Love-god's garland.

Palma 'palm' is so named because, being naturally bound on both sides, it has paria 'equal' leaves.

63. The poets, in that they say that the fiery seed fell from the Sky into the sea and Venus was born "from the foam-masses," through the conjunction of fire and moisture, are indicating that the vis 'force' which they have is that of Venus. Those born of this vis have what is called vita 'life,' and that was meant by Lucilius:

Life is force, you see; to do everything force doth compel us.

64. Wherefore because the Sky is the beginning, Saturn was named from satus 'sowing'; and because fire is a beginning, waxlights are presented to patrons at the Saturnalia. Ops is the Earth, because in it is every opus 'work'

and there is opus 'need' of it for living, and therefore Ops is called mother, because the Earth is the mother. For she All men hath produced in all the lands, and takes them back again, she who Gives the rations, as Ennius says, who Is Ceres, since she brings (gerit) the fruits.

For with the ancients, what is now G, was written C.

65. These same gods Sky and Earth are Jupiter and Juno, because, as Ennius says, That one is the Jupiter of whom I speak, whom Grecians call Air; who is the windy blast and cloud, and after wards the rain; After rain, the cold; he then becomes again the wind and air. This is why those things of which I speak to you are Jupiter: Help he gives to men, to fields and cities, and to beasties all.

Because all come from him and are under him, he addresses him with the words:

father and king of the gods and the mortals.

Pater 'father' because he patefacit 'makes evident' the seed; for then it patet 'is evident' that conception has taken place, when that which is born comes out from it.

66. This same thing the more ancient name of Jupiter shows even better: for of old he was called Diovis and Diespiter, that is, dies pater 'Father Day'; from which they who come from him are called dei 'deities,' and dius 'god' and divum 'sky,' whence sub divo 'under the sky,' and Dius Fidius 'god of faith.' Thus from this reason the roof of his temple is pierced with holes, that in this way the divum, which is the caelum 'sky,' may be seen. Some say that it is improper to take an oath by his name, when you are under a roof. Aelius said that Dius Fidius was a son of Diovis, just as the Greeks call Castor the son of Zeus, and he thought that he was Sancus in the Sabine tongue, and Hercules in Greek. He is likewise called Dispater in his lowest capacity, when he is joined to the earth, where all things vanish away even as they originate; and because he is the end of these ortus 'creations,' he is called Orcus.

67. Because Juno is Jupiter's wife, and he is Sky, she Terra 'Earth,' the same as Tellus 'Earth,' she also, because she iuvat 'helps' una 'along' with Jupiter, is called Juno, and Regina 'Queen,' because all earthly things are hers.

68. Sol 'Sun' is so named either because the Sabines called him thus, or because he solus 'alone' shines in such a way that from this god there is the daylight. Luna 'Moon' is so named certainly because she alone 'lucet' shines at night. Therefore she is called Noctiluca 'Night-Shiner' on the Palatine; for there her temple noctu lucet 'shines by night.' Certain persons call her Diana, just as they call the Sun Apollo (the one name, that of Apollo, is Greek, the other Latin); and from the fact that the Moon goes both high and widely, she is called Diviana. From the fact that the Moon is wont to be under the lands as well as over them, Ennius's Epicharmus calls her Proserpina. Proserpina received her name because she, like a serpens 'creeper,' moves widely now to the right, now to the left. Serpere 'to creep' and proserpere 'to creep forward' meant the same thing, as Plautus means in what he writes:

Like a forward-creeping beast.

69. She appears therefore to be called by the Latins also Juno Lucina either because she is also the Earth, as the natural scientists say, and *lucet* 'shines'; or because from that light of hers in which a conception takes place until that one in which there is a birth into the light, the Moon continues to help, until she has brought it forth into the light when the months are past, the name Juno Lucina was made from *iuvare* 'to help' and *lux* 'light.' From this fact women in child-birth invoke her; for the Moon is the guide of those that are born, since the months belong to her. It is clear that the women of olden times observed this, because women have given this goddess credit notably for their eyebrows. For Juno Lucina ought especially to be established in places where the gods give light to our eyes.

70. *Ignis* 'fire' is named from *gnasci* 'to be born,' because from it there is birth, and everything which is born the fire enkindles; therefore it is hot, just as he who dies loses the fire and becomes cold. From the fire's *vis ac violentia* 'force and violence,' now in greater measure, *Vulcan* was named. From the fact that fire on account of its brightness fidget 'flashes,' come *fulgur* 'lightning-flash' and *fulmen* 'thunderbolt,' and what has been *fulmine ictum* 'hit by a thunderbolt' is called *fulguritum*.

71. Among deities of an opposite kind, *Lympha* 'water-nymph' is derived from the water's *lapsus lubricus* 'slippery gliding.' *Juturna* was a nymph whose function was *iuvare* 'to give help'; therefore many sick persons, on account of this name, are wont to seek water from her spring. From springs and rivers and the other waters gods are named, as *Tiberinus* from the river *Tiber*, and *Velinia* from the lake of the *Velinus*, and the *Commotiles* 'Restless' Nymphs at the *Cutilian Lake*, from the *commotus* 'motion,' because there an island *commovetur* 'moves about' in the water.

72. *Neptune*, because the sea veils the lands as the clouds veil the sky, gets his name from *nuptus* 'veiling,' that is, *opertio* 'covering,' as the ancients said; from which *nuptiae* 'wedding,' *nuptus* 'wedlock' are derived. *Salacia*, wife of *Neptune*, got her name from *salum* 'the surging sea.' *Venilia* was named from *venire* 'to come' and that *ventus* 'wind' which *Plautus* mentions:

As that one said who with a favouring wind was borne Over a placid sea:
I'm glad I wend.

73. *Bellona* 'Goddess of War' is said now, from *bellum* 'war,' which formerly was *Duellona*, from *duellum*. *Mars* is named from the fact that he commands the *mares* 'males' in war, or that he is called *Mamers* among the *Sabines*, with whom he is a favourite. *Quirinus* is from *Quirites*. *Virtus* 'valour,' as *viritus*, is from *virilitas* 'manhood.' *Honos* 'honour, office' is said from *onus* 'burden'; therefore *honestum* 'honourable' is said of that which is *oneratum* 'loaded with burdens,' and it has been said:

Full onerous is the honour which maintains the state.

The name of *Castor* is Greek, that of *Pollux* likewise from the Greeks; the form of the name which is found in old Latin literature is *Polluces*, like Greek

Πολυδεύκης, not Pollux as it is now. Concordia 'Concord' is from the cor congruens 'harmonious heart.'

74. Feronia, Minerva, the Novensides are from the Sabines. With slight changes, we say the following, also from the same people: Pales, Vesta, Salus, Fortune, Fons, Fides 'Faith.' There is scent of the speech of the Sabines about the altars also, which by the vow of King Tatius were dedicated at Rome: for, as the Annals tell, he vowed altars to Ops, Flora, Vediovis and Saturn, Sun, Moon, Vulcan and Summanus, and likewise to Larunda, Terminus, Quirinus, Vertumnus, the Lares, Diana and Lucina; some of these names have roots in both languages, like trees which have sprung up on the boundary line and creep about in both fields: for Saturn might be used as the god's name from one source here, and from another among the Sabines, and so also Diana; these names I have discussed above.

75. This is what has to do with the immortals; next let us look at that which has to do with mortal creatures. Amongst these are the animals, and because they abide in three places — in the air, in the water, and on the land — I shall start from the highest place and come down to the lowest. First the names of them all, collectively: alites 'winged birds' from their alae 'wings,' volucres 'fliers' from volatus 'flight.' Next by kinds: of these, very many are named from their cries, as are these: upupa 'hoopoe,' cuculus 'cuckoo,' corvus 'raven,' hirundo 'swallow,' ulula 'screech-owl,' bubo 'horned owl'; likewise these: pavo 'peacock,' anser 'goose,' gallina 'hen,' columba 'dove.'

76. Some got their names from other reasons, such as the noctua 'night-owl,' because it stays awake and hoots noctu 'by night,' and the luscinola 'nightingale,' because it is thought to canere 'sing' luctuose 'sorrowfully' and to have been transformed from the Athenian Procne in her luctus 'sorrow,' into a bird. Likewise the galeritus 'crested lark' and the motacilla 'wagtail,' the one because it has a feather standing up on its head, the other because it is always moving its tail. The merula 'blackbird' is so named because it flies mera 'unmixed,' that is, alone; on the other hand, the graguli 'jackdaws' got their names because they fly gregatim 'in flocks,' as certain Greeks call greges 'flocks' γέγραφα. Ficedulae 'fig-peckers' and miliariae 'ortolans' are named from their food, because the ones become fat on the ficus 'fig,' the others on milium 'millet.'

77. The names of water animals are some native, some foreign. From abroad come muraena 'moray,' because it is μύραινα in Greek, cybium 'young tunny' and thunnus 'tunny,' all whose parts likewise go by Greek names, as melander 'black-oak-piece' and uraeon 'tail-piece.' Very many names of fishes are transferred from land objects which are like them in some respect, as anguilla 'eel,' lingulaca 'sole,' sudis 'pike.' Others come from their colours, like these: asellus 'hake,' umbra 'umbra,' turdus 'wrasse.' Others come from some physical power, like these: lupus 'sea-bass,' canicula 'dogfish,' torpedo 'electric ray.' Likewise among the shellfish there are some from Greek, as peloris 'sunset shell,' ostrea 'oyster,' echinus 'sea-urchin'; and

also native words that point out a likeness, as *surenae*, *pectunculi* ‘scallops,’ *ungues* ‘razor-clams.’

78. There are also animals in the water, which at times come out on the land: some with Greek names, like the octopus, the hippopotamus, the crocodile; others with Latin names, like *rana* ‘frog,’ *anas* ‘duck,’ *mergus* ‘diver.’ Whence the Greeks give the name *amphibia* to those which can live both in the water and on the land. Of these, the *rana* is named from its voice, the *anas* from *nare* ‘to swim,’ the *mergus* because it catches its food by *mergendo* ‘diving’ into the water.

79. Likewise there are other names in this class, that are from the Greeks, as *querquedula* ‘teal,’ because it is *κερκήδης*, and *alcedo* ‘kingfisher,’ because this is *άλκυών*; and Latin names, such as *testudo* ‘tortoise,’ because this animal is covered with a *testa* ‘shell,’ and *lolligo* ‘squid,’ because it *volat* ‘flies’ up from under, originally *volligo*, but now with one letter changed. Just as in Egypt there is a quadruped living in the river, so there are river quadrupeds in Latium, named *lutra* ‘otter’ and *fiber* ‘beaver.’ The *lutra* is so named because it is said to cut off the roots of trees on the bank and set the trees loose: from *luere* ‘to loose,’ *lutra*. The beaver was called *fiber* because it is usually seen very far off on the bank of the river to right or to left, and the ancients called a thing that was very far off *februm*; from which in blankets the last part is called *fimbriae* ‘fringe’ and the last part in the liver is the *fibra* ‘fibre.’

80. Among the living beings on the land, I shall speak first of terms which apply to human beings, then of domestic animals, third of wild beasts. I shall start from the offices of the state. The Consul was so named as the one who should *consulere* ‘ask the advice of’ people and senate, unless rather from this fact whence *Accius* takes it when he says in the *Brutus*:

Let him who counsels right, be called the Consul.

The Praetor was so named as the one who should *praeire* ‘go before’ the law and the army; whence *Lucilius* said this:

Then to go out in front and before is the duty of praetors.

81. The Censor was so named as the one at whose *censo* ‘rating,’ that is, *arbitrium* ‘judgement,’ the people should be rated. The Aedile, as the one who was to look after *aedes* ‘buildings’ sacred and private. The Quaestors, from *quaerere* ‘to seek,’ who *conquirerent* ‘should seek into’ the public moneys and illegal doings, which the *triumviri capitales* ‘the prison board’ now investigate; from these, afterwards, those who pronounce judgement on the matters of investigation were named *quaesitores* ‘inquisitors.’ The *Tribuni Militum* ‘tribunes of the soldiers,’ because of old there were sent to the army three each on behalf of the three tribes of *Ramnes*, *Luceres*, and *Tities*. The *Tribuni Plebei* ‘tribunes of the plebs,’ because from among the tribunes of the soldiers tribunes of the plebs were first created, in the Secession to *Crustumerium*, for the purpose of defending the plebs ‘populace.’

82. The Dictator, because he was named by the consul as the one to whose

dictum 'order' all should be obedient. The Magister Equitum 'master of the cavalry,' because he has supreme power over the cavalry and the replacement troops, just as the dictator is the highest authority over the people, from which he also is called magister, but of the people and not of the cavalry. The remaining officials, because they are inferior to these magistri 'masters,' are called magistratus 'magistrates,' derived just as albus 'whitened, white-clad' is derived from albus 'white.'

83. The sacerdotes 'priests' collectively were named from the sacra 'sacred rites.' The pontifices 'high-priests,' Quintus Scaevola the Pontifex Maximus said, were named from posse 'to be able' and facere 'to do,' as though pontifices. For my part I think that the name comes from pons 'bridge'; for by them the Bridge-on-Piles was made in the first place, and it was likewise repeatedly repaired by them, since in that connexion rites are performed on both sides of the Tiber with no small ceremony. The curiones were named from the curiae; they are created for conducting sacred rites in the curiae.

84. The flamines 'flamens,' because in Latium they always kept their heads covered and had their hair girt with a woollen filum 'band,' were originally called filamines. Individually they have distinguishing epithets from that god whose rites they perform; but some are obvious, others obscure: obvious, like Martialis and Volcanalis; obscure are Dialis and Furinalis, since Dialis is from Jove, for he is called also Diovis, and Furinalis from Furrina, who even has a Furinal Festival in the calendar. So also the Flamen Falacer from the divine father Falacer.

85. The Salii were named from salitare 'to dance,' because they had the custom and the duty of dancing yearly in the assembly-places, in their ceremonies. The Luperci were so named because they make offerings in the Lupercal at the festival of the Lupercalia. Fratres Arvales 'Arval Brothers' was the name given to those who perform public rites to the end that the ploughlands may bear fruits: from ferre 'to bear' and arva 'ploughlands' they are called Fratres Arvales. But some have said that they were named from fratria 'brotherhood': fratria is the Greek name of a part of the people, as at Naples even now. The Sodales Titii 'Titian Comrades' are so named from the titiantes 'twittering' birds which they are accustomed to watch in some of their augural observations.

86. The Fetiales 'herald-priests,' because they were in charge of the state's word of honour in matters between peoples; for by them it was brought about that a war that was declared should be a just war, and by them the war was stopped, that by a foedus 'treaty' the fides 'honesty' of the peace might be established. Some of them were sent before war should be declared, to demand restitution of the stolen property, and by them even now is made the foedus 'treaty,' which Ennius writes was pronounced fidus.

87. In military affairs, the praetor was so called as the one who should praeire 'go at the head' of the army. The imperator 'commander,' from the imperium 'dominion' of the people, as the one who crushed those enemies

who had attacked it. The legati 'attachés,' those who were lecti 'chosen' officially, whose aid or counsel the magistrates should use when away from Rome, or who should be messengers of the senate or of the people. The exercitus 'army,' because by exercitando 'training' it is improved. The legio 'legion,' because the soldiers leguntur 'are gathered' in the levy.

88. The cohors 'cohort,' because, just as on the farm the cohors 'yard' coniungitur 'is joined together' of several buildings and becomes a certain kind of unity, so in the army it copulatur 'is coupled together' of several maniples: the cohors which is on the farm, is so called because around that place the flock cooritur 'assembles,' although Hypsicrates says that the cohors on the farm, as said by the poets, is the word which in Greek is χορτος 'farmyard.' The manipulus 'maniple' is the smallest manus 'troop' which has a standard of its own to follow. The centuria 'century' consists of those who are under one centurio 'centurion,' whose proper number is centenarius 'one hundred each.'

89. Milites 'soldiers,' because at first the legion was made of three milia 'thousands,' and the individual tribes of Titienses, Ramnes, and Luceres sent their milia 'thousands' of milites 'soldiers.' The hastati 'spearmen' were so called as those who in the first line fought with hastae 'spears,' the pilani 'javelin-men' as being those who fought with pila 'javelins,' the principes 'first-men' as those who from the principium 'beginning' fought with swords; these words were less perspicuous later, when tactics had been changed. The pilani are called also triarii 'third-line-men,' because in the battle arrangement they were set in the rear, in the third line, as reserves; because these men habitually subsidebant 'sat' while waiting, from this fact the subsidium 'reserve force' got its name, whence Plautus says:

Come now, all of you sit by as troopers in reserve are wont.

90. Auxilium 'auxiliaries' was so called from auctus 'increase,' when those foreigners who were intended to give help had added themselves to the fighters. Praesidium 'garrison' was said of those who praesidebant 'sat in front' outside the main camp somewhere, that the district might be safer. Obsidium 'siege' was said from obsidere 'to sit in the way,' that the enemy might not be able to sally forth. Insidiae 'ambush' likewise from insidere 'to sit in a place,' since they did this that they might more easily diminish the enemy's forces. Duplicarii 'doublers' were those to whom by order duplicia 'double' rations were given on account of their notable valour.

91. Turma 'squadron' is from terima (the E has changed to U), because they were composed of ter 'three times' ten horsemen, from the three tribes of Titienses, Ramnes, and Luceres. Therefore the leaders of the individual decuriae 'groups of ten' were called decurions, who from this fact are even now three in each squadron. Those whom at first the decurions themselves adoptabant 'chose' as their assistants, were at the start called optiones 'choices'; but now the tribunes, to increase their influence, do the appointing of them. Tubicines 'trumpeters,' from tuba 'trumpet' and canere 'to sing or

play'; in like fashion *liticines* 'cornetists.' The *classicus* 'class-musician' is named from the *classis* 'class of citizens'; he likewise plays on the horn or the cornet, for example when they call the classes to gather for an assembly.

92. Among the words which have to do with personal fortune, some are not very clear, such as *pauper* 'poor,' *dives* 'rich,' *miser* 'wretched,' *beatus* 'blest,' and others as well. *Pauper* is from *paulus* *lar* 'scantily equipped home.' *Mendicus* 'beggar' is from *minus* 'less,' said of one who, when there is a need, has *minus* 'less' than nothing. *Dives* 'rich' is from *divus* 'godlike person,' who, as being a *deus* 'god,' seems to lack nothing. *Opulentus* 'wealthy' is from *ops* 'property,' said of one who has it in abundance; from the same, *inops* 'destitute' is said of him who lacks *ops*, and from the same source *copis* 'well supplied' and *copiosus* 'abundantly furnished.' *Pecuniosus* 'moneyed' is from a large amount of *pecunia* 'money'; *pecunia* is from *pecu* 'flock': for it was among keepers of flocks that these words originated.

93. For artisans the chief cause of the names is the art itself, that is, that from the *ars medicina* 'medical art' the *medicus* 'physician' should be named, and from the *ars sutrina* 'shoemaker's art' the *sutor* 'shoemaker,' and not directly from *mederi* 'to cure' and *suere* 'to sew,' though these are the absolutely final sources for such names. For these are the roots of these things, as will be shown in the next book. Therefore, because an artisan is called from his art and not many names in this class are obscure, I shall leave them and go on.

94. There is a like origin for those names which are given from some special skill, such as *praestigiator* 'juggler,' *monitor* 'prompter,' *nomenclator* 'namer'; so also those which are derived from a special interest, such as *cursor* 'runner,' *natator* 'swimmer,' *pugil* 'boxer.' The words which are in this class too, are generally obvious, like *legulus* 'picker,' one of olives and the other of grapes. If these are less obvious in the cases of *vindemiator*, *vestigator*, and *venator*, still the same principle holds, that *vindemiator* 'vintager' is said either because he gathers the *vinum* 'wine' or because they *demunt* 'take' this from the *vitis* 'grapevine'; *vestigator* 'tracker,' from the *vestigia* 'tracks' of the beasts which he trails; *venator* 'hunter' from *ventus* 'wind,' because he follows the stag towards the wind and into the wind.

95. So much about men: what comes next here is about cattle, as follows. *Pecus* 'cattle,' from the fact that they *perpascebant* 'grazed,' whence as a whole they were called *pecora* 'flocks and herds.' Because the herdsmen's *pecunia* 'wealth' then lay in their *pecus* 'flocks' and the base for standing is a *pes* 'foot' (from which in buildings the ground is called a great *pes* 'foot' and a man who has founded a business is said to have established his *pes* 'footing'), from *pes* 'foot' they gave the name *pecus*, *pecudis* 'one head of cattle,' just as from the same they said *pedica* 'fetter' and *pedisequus* 'footman' and *pecuariae* 'privately owned' sheep or anything else: for this was the first private property. Hence they called it a *peculatus* 'peculation' from the state in the beginning, when a fine was imposed in *pecus* 'cattle' and

there was a collection into the state treasury, of what had been diverted.

96. Regarding cattle from which there is larger profit, there is the same use of names here as among the Greeks: *sus* 'swine,' the same as *ῥῆς*; *bos* 'cow,' the same as *βοῦς*; *taurus* 'bull,' the same as *ταῦρος*; likewise *ovis* 'sheep,' the same as *οἷς*: for thus the ancients used to say, not *πρόβατον* as they do now. This identity of the names in Latium and in Greece may be the result of invention after the natural utterances of the animals. *Armenta* 'plough-oxen,' because they raised oxen especially that they might select some of them for arandum 'ploughing'; thence they were called *arimenta*, from which the third letter I was afterwards squeezed out. *Vitulus* calf,' because in Greek it was anciently *ιταλός*; or from *vegetulus*, a name given because most calves are *vegeti* 'frisky.' A *iuvencus* 'bullock' was one which could now *iuvare* 'help' in tilling the fields.

97. *Capra* 'she-goat' was originally *carpa* 'cropper,' from which is written All-cropping she-goats.

Hircus 'buck,' which the Sabines call *fircus*; and what there is *fedus*, in Latium is *hedus* 'kid' in the country, and in the City it is *haedus*, with an added A, as is the case with many words. *Porcus* 'pig,' because the Sabines say *aprunus porcus* 'boar pig'; therefore *porcus* 'pig,' unless it comes from the Greeks, because at Athens in the Books of the Sacrifices *πόρκη* 'female pig' is written, and *πόρκος* 'male pig.'

98. *Aries* 'ram,' as some used to say, from *arae* 'altars'; our ancients said *ariuga* 'altar-mate,' and from this formed a masculine *ariugus*. These are those whose vital organs are in the sacrifices boiled in a pot and not roasted on a spit, of which Accius writes and which we see in the Pontifical Books. Among sacrificial victims, that victim which by the specifications is to have horns, they call an *ariuga*; but if the testicles are removed from a male sheep and its nature is thereby forcibly *versa* 'altered,' the name *verbex* 'wether' is derived as its designation.

99. An *agnus* 'lamb' is so named because it is *agnatus* 'born as an addition' to the flock of sheep. A *catulus* 'puppy' is named from its quick and keen scent, like the names *Cato* and *Catulus*; and from this, *canis* 'dog': unless, just as the trumpet and the horn are said to *canere* 'sing' when they give some signal, so the *canis* is named because it likewise, both when guarding the house day or night, and when engaged in hunting, gives the signal with its voice.

100. The names of wild beasts are likewise some of them foreign, such as *panthera* 'panther,' *leo* 'lion': both Greek, whence also certain nets called *panther* and *lioness*, and there are courtesans named *Pantheris* and *Leaena*. The *tigris* 'tiger,' which is as it were a striped lion, which as yet they have not been able to take alive, has its name from the Armenian language, for in Armenia both an arrow and a very swift river are named *Tigris*. The name of the *ursus* 'bear' is of Lucanian origin, or our ancestors called it from its voice, and so did the Lucanians. The *camelus* 'camel' has come to Latium bringing

its own Syrian name with it, and so has the camelopardalis 'giraffe' which was recently brought from Alexandria, so called because it was in form like a camel and in spots like a panther.

101. Apri 'boars,' from the fact that they frequent aspera 'rough' places, unless from the Greeks, because in Greek these are <κ>άπροι. Caprea 'roe-deer,' from a certain likeness to the capra 'she-goat.' Cervi 'stags,' because they gerunt 'carry' big horns, and so they are gervi; the word has changed G to C, as has happened in many words. Lepus 'hare,' because the Sicilians, like certain Aeolian Greeks, say λέπορις. Inasmuch as the Sicilians originated from Rome, as our old Annals say, perhaps they carried the word from here to Sicily, but also left it here behind them. Volpes 'fox,' as Aelius used to say, because it volat 'flies' with its pedes 'feet.'

102. The next living beings to be discussed are those which are said to live, and yet do not breathe, such as bushes. Virgultum 'bush' is said from viridis 'green,' and viridis from a certain vis 'power' of moisture: if this moisture has thoroughly dried out, the bush dies. Vitis 'grape-vine,' because it is the source of vinum 'wine.' Malum 'apple,' because the Aeolian Greeks call it μάλον. The pinus 'pine,'... The iuglans 'walnut,' because while this nut is like an acorn before it is cleansed of its hull, the inner nut, being best and biggest, is called iu-glans from Iu-piter and glans 'acorn.' The same word nux 'nut' is so called because its juice makes a person's skin black, just as nox 'night' makes the air black.

103. Of those which are grown in gardens, some are called by foreign names, as, by Greek names, ocimum 'basil,' menta 'mint,' ruta 'rue,' which they now call πήγανον; likewise caulis 'cabbage,' lapathium 'sorrel,' radix 'radish': for thus the ancient Greeks called what they now call ράφανος; likewise these from Greek names: serpyllum 'thyme,' rosa 'rose,' each with one letter changed; likewise Latin names from these Greek names: κολίανδρον 'coriander,' μαλάχη, κύμινον 'cummin'; likewise lilium 'lily' from λείριον and malva 'mallow' from μαλάχη and sisymbrium 'mint' from σισύμβριον.

104. Native words: lactuca 'lettuce' from lact 'milk,' because this herb contains milk; brassica 'cabbage' as though praesica, because from its stalk praesicatur 'leaves are cut off' one by one; asparagi 'asparagus shoots,' because they are gathered from aspera 'rough' bushes and the stems themselves are rough, not smooth: unless it is a Greek name, for in Greece also they say ἀσπάραγος. Cucumeres 'cucumbers' are named from their curvor 'curvature,' as though curvimeres. Fructus 'fruits' are named from ferre 'to bear,' namely those things which the farm and those things which are on the farm bear, that we may enjoy them. From this are derived fruges 'field products' and frumentum 'corn,' but these come out of the earth: even frumentum, because to the pot-boiled vitals it is customary to add some of the mola 'grits,' that is, salt and spelt molitum 'ground up' together. Uvae 'grapes,' from uvor 'moisture.'

105. I shall now speak of things which are made by human hands: food, clothing, tools, and anything else which seems to be associated with them. Of foods the most ancient is *puls* 'porridge'; this got its name either because the Greeks called it thus, or from the fact which Apollodorus mentions, that it makes a sound like *puls* when it is thrown into boiling water. *Panis* 'bread,' because at first they made it in the shape of a *panus* 'cloth' such as women make in weaving; after they began to make it in other shapes, they started saying *panificium* 'pastry,' from *panis* 'bread' and *facere* 'to make.' From this, *panarium* 'bread-closet,' where they kept it, like *granarium* 'granary,' where they stored the *granum* 'grain' of the corn, from which *granarium* was derived — unless it came from the fact that the Greeks called the grain *κράνον*; and in this case it was from the Greeks also that the place in which are kept the grains that are stored, was called a *granarium*.

106. *Hordeum* 'barley,' from *horridus* 'bristling.' *Triticum* 'wheat,' because it was *tritum* 'threshed out' from the ears. *Far* 'emmer,' from *facere* 'to make,' because it is made into flour in the mill. *Milium* 'millet,' from the Greek: for it is *μελίμη*. *Libum* 'cake,' because, after it was baked, *libabatur* 'there was an offering of some' of it to the gods before it was eaten. *Testuacium* 'pot-cake,' because it was baked in a heated earthen *testu* 'pot,' as even now the matrons do this at the *Matralia*. *Circuli* 'rings,' because they poured into the pan a regular circuitus 'circuit' of a batter made of flour, cheese, and water.

107. Certain persons who used to make these rather carelessly called them *lixulae* 'softies' and *similixulae* 'half-softies,' by the Sabine name, such was their general use among the Sabines. Those that consist of a leavened *globus* 'ball' of dough and are cooked in oil, are from *globus* called *globi* 'globes.' *Crustulum* 'cookie,' from the *crusta* 'crust' of the porridge, whose *crusta* is so named because it is, as it were, a *corium* 'hide' and it *uritur* 'is burnt.' The other confections are in general of obvious origin, being taken from Greek words, like *thrion* 'omelette' and *placenta* 'sand-tart.'

108. That which they ate with their *puls* 'porridge,' was from that fact called *pulmentum* 'side-dish,' as Plautus says; from this was said *pulmentarium* 'relish': this the shepherds lacked in the early times. *Caseus* 'cheese' was named from *coactum* 'coagulated' milk, as though *coaxeus*. Then after they ceased to be satisfied with those foods which nature supplied of her own accord without the use of fire, among which were apples and like fruits, they boiled down in a pot those which they could less easily eat raw. From *olla* 'pot' the *holera* 'vegetables' were named, because it is the task of *ollae* 'pots' to soften the raw *holera* 'vegetables.' One of these, because it *eruitur* 'is dug out' of the earth for cooking, was called *ruapa*, from which comes *rapa* 'turnip.' *Olea* 'olive berry,' from *ἐλαία*; the *orchitis* is a large kind of olive, so called because the Athenians call it *ὁρχις μορία* 'the sacred olive-berry.'

109. From here they came to domestic animals as meat for the table. As

suilla 'pork' is said from sus 'swine,' so other meats are named from the other kinds of animals. The nature of things shows us that men began to use this first roasted, second boiled, third cooked in its own juice. Assum 'roasted' is said because as a result of the fire it assudescit 'begins to sweat,' that is uvescit 'becomes moist': for uvidum is the same as humidum 'moist,' and therefore where this moisture is not present, there is a lack of juice; and therefore the roast that is to sweat drips on account of the heat, and just as the raw meat has an excess of moisture, so the thoroughly cooked meat has very little juice. Elixum 'boiled' is said from the liquor 'fluid' of the water; and ex iure 'cooked in its own juice' is said because this is more iucundum 'tasty' than seasoning.

110. Succidia 'leg of pork' is said from sues caedendae 'the cutting up of the swine'; for this was the first domestic animal that the owners began to slaughter and to salt in order to keep the meat unspoiled. Tegus 'piece of the back' of swine, from this, that by this piece the animal tegitur 'is covered.' Perna 'ham,' from pes 'foot.' Sueris, from the animal's name. Offula 'rib-roast,' from offa, a very small sueris. Insicia 'minced meat' from this, that the meat is insecta 'cut up,' just as in the Song of the Salii the word prosicium 'slice' is used, for which, in the offering of the vitals, the word prosectum is now used. Murtatum 'myrtle-pudding,' from murta 'myrtle-berry,' because this berry is added plentifully to its stuffings.

111. An intestine of the thick sort that was stuffed, they call a Lucanica 'Lucanian,' because the soldiers got acquainted with it from the Lucanians, just as what they found at Falerii they call a Faliscan haggis; and they say fundulus 'bag-sausage' from fundus 'bottom,' because this is not like the other intestines, but is open at only one end: from this, I think, the Greeks called it the blind intestine. From the same fartura 'stuffing' were called the farcimina 'stuffies' in the case of the vital organs for the sacrifice, whence also farticulum 'stufflet'; in this case, because it is the most slender intestine that is stuffed, it is called hila from that hilum 'whit' which Ennius uses:

And of loss not a whit does she suffer.

Because at the top of this stuffy there is a little projection, it is called an apexabo, because the projection is like the apex 'pointed cap' on a human head. The third kind of sausage is the longavo, because it is longer than those two others.

112. The augmentum 'increase-cake' is so called because a piece of it is cut out and put on the liver of the sacrificed victim at the presentation to the deity, for the sake of augendi 'increasing' it. Magmentum 'added offering,' from magis 'more,' because it attaches magis 'more' closely to the worshipper's piety: for this reason magmentaria fana 'sanctuaries for the offering of magmenta' have been established in certain places, that the added offering may there be laid on the original and offered with it. Mattea 'cold meat-pie' is so named because in Greek it is ματτή. Likewise from the Greeks is another meat-dish called..., which contains item by item the

following:..., an egg, a truffle.

113. Lana 'wool' is a Greek word, as Polybius and Callimachus write. Purpura 'purple,' from the colour of the purpura 'purple-fish' of the sea: a Punic word, because it is said to have been first brought to Italy by the Phoenicians. Stamen 'warp,' from stare 'to stand,' because by this the whole fabric on the loom stat 'stands' up. Subtemen 'woof,' because it subit 'goes under' the stamen 'warp.' Trama 'wide-meshed cloth,' because the cold trameat 'goes through' this kind of garment. Densum 'close-woven cloth,' from the dentes 'dents' of the sley with which it is beaten. Filum 'thread,' because it is the smallest hilum 'shred'; for this is the smallest thing in a garment.

114. Pannus 'bobbin,' is a Greek word, where E has become A. Panuvellium 'bobbin with thread' was said from panus 'bobbin' and volvere 'to wind' the thread. Tunica 'shirt,' from tuendo 'protecting' the body: tunica as though it were tuendica. Toga 'toga' from tegere 'to cover.' Cinctus 'belt' and cingillum 'girdle,' from cingere 'to gird,' the one assigned to men and the other to women.

115. Arma 'arms,' from arcere 'to ward off,' because with them we arcemus 'ward off' the enemy. Parma 'cavalry shield,' because from the centre it is par 'even' in every direction. Conum 'pointed helmet,' because it cogitur 'is narrowed' toward the top. Hasta 'spear,' because it is usually carried astans 'standing up.' Iaculum 'javelin,' because it is made that it may iaci 'be thrown.' Tragula 'thong-javelin,' from traicere 'to pierce.' Scutum 'shield,' from sectura 'cutting,' as though secutum, because it is made of wood cut into small pieces. Umbones 'bosses' from a Greek word, namely ἄμβωνες.

116. Gladium 'sword,' from clades 'slaughter,' with change of C to G, because the gladium is made for a slaughter of the enemy; likewise from its omen was said pilum, by which the enemy periret 'might perish,' as though perilum. Lorica 'corselet,' because they made chest-protectors from lora 'thongs' of rawhide; afterwards the Gallic corselet of iron was included under this name, an iron shirt made of links. Balteum 'sword-belt,' because they used to wear a leather belt bullatum 'with an amulet attached,' was called balteum. Ocrea 'shin-guard' was so called because it was set in the way ob crus 'before the shin.' Galea 'leather helmet,' from galerum 'leather bonnet,' because many of the ancients used them.

117. Tubae 'trumpets,' from tubi 'tubes,' a name by which even now the trumpeters of the sacrifices call them. Cornua 'horns,' because these, which are now of bronze, were then made from the cornu 'horn' of an ox. Vallum 'camp wall,' either because no one could varicare 'straddle' over it, or because the ends of the forked sticks used there had individually the shape of the letter V. Cervi 'chevaux-de-frise,' from the likeness to the horns of a cervus 'stag'; so the rest of the terms in general, from a likeness, as vineae 'mantlets,' testudo 'tortoise,' aries 'ram.'

118. The eating-table they used to call a cilliba; it was square, as even now it is in the camp; the name cilliba came from cibus 'victuals.' Afterwards it was made round, and the fact that it was media 'central' with us and μέσα 'central' with the Greeks, is the probable reason for its being called a mensa 'table'; unless indeed they used to put on, amongst the victuals, many that were mensa 'measured out.' Trulla 'ladle,' from its likeness to a trua 'gutter,' but because this is big and the other is small, they named it as if it were truella 'small trua'; this the Greeks call a τρυήλη. A trua 'gutter' is that by which they pour the water from the kitchen into the privy: trua, because by it the water travolat 'flies across.' From the same is named the truleum 'basin'; for it is like in shape, except that it is broader because it is to hold water, and that the handle is not channelled except in the case of a wine.-truleum.

119. There was also the matellio 'pot,' named as well as modelled after the matula 'chamber-pot,' which, after it had got quite far away from the shape of a matula, was called also an aqualis 'wash-basin,' from aqua 'water.' A jar for water they called a futis, because with it in the dining-room they infundebant 'poured on' the guests' hands the water that had been brought; for the performance of this same service there was afterward added a vessel with the Greek name of nanus 'dwarf' and the Latin name barbatus 'bearded man,' because of the Greek figure. Pelvis 'basin' was earlier pedeluis, from the lavatio 'washing' of the pedes 'feet.' Candelabrum 'candlestick,' from candela 'taper'; for from these blazing cords were hung. The lucerna 'lamp' was invented later; it was named from lux 'light' or because the Greeks call it λύχνος.

120. Vessels on the eating-table: The vessel in which they set on the table porridge or anything with a great deal of juice, they called a catinus 'pot,' from capere 'to contain,' unless it is because the Sicilians call that in which they put their roasts a κάτινος. The magida and the langula, both meaning 'platter,' they named from the magnitudo 'size' of the one and the latitudo 'width' of the other. Patenae 'plates' they called from patulum 'spreading,' and the little plates, with which they offered the gods a preliminary sample of the dinner, they called patellae 'saucers.' Tryblia 'bowls' and canistra 'bread-baskets,' though people think that they are Latin, are really Greek: for τρύβλιον and κανοῦν are said in Greek. The remaining terms I pass by, since their sources are obvious.

121. A round table for wine was formerly called a cilliba, as even now it is in the camp. This seems to be derived from the Greek κυλικεῖον 'buffet,' from the cup cylix which stands on it. The capides 'bowls' and smaller capulae 'cups' were named from capere 'to seize,' because they have handles to make it possible for them prehendi 'to be grasped,' that is, capi 'to be seized.' Their shapes we even now see among the sacred vessels, old-fashioned shapes in wood and earthenware.

122. In addition there were among the drinking-cups the paterae 'libation-saucers,' named from this, that they patent 'are open' wide. For the sake of

preserving the ancient practice, they use cups of this kind even now for passing around the potio 'draught' at the public banquet, when the magistrates enter into their office; and it is this kind of cup that the magistrate uses in sacrificing to the gods, when he gives the wine to the god. Pocula 'drinking-cups,' from potio 'draught,' whence potatio 'drinking bout' and also posca 'sour wine.' These may however come from πότος, because πότος is the Greek for potio.

123. The source of a drink is aqua 'water,' so called because its surface is aequa 'level.' A fons 'spring' is that from which running water funditur 'is poured' out of the earth, just as a fistula 'pipe' is that from which there is a fusus 'outpour' of water. The sinum is a wine-jar of a larger sort, called from sinus 'belly,' because the sinum had a greater cavity than cups. Likewise there are those called lepestae, the kind of wine-jars that are even now, on the days of the Sabine festivals, placed on the table of the gods; I have found in ancient Greek writers a kind of cup called δεπέστα, for which reason the source of the name quite certainly set out from there into the Sabine and Roman territory.

124. Those who were giving wine in such a way as to pour it little by little, called the vessel a guttus 'cruet,' from the guttae 'drops'; those who were taking it little by little from a larger container, called the instrument a simpuvium 'dipping ladle,' from sumere 'to take out.' Into its place, in banquets, there came from Greece the epichysis 'pouring ladle' and the cyathus 'dipping ladle'; but in the sacrifices the guttus and the simpuvium remained in use.

125. A second kind of table for vessels was of stone, an oblong rectangle with one pedestal; it was called a cartibulum. When I was a boy this used to be placed in many persons' houses near the opening in the roof of the court, and on and around it were set bronze vessels; perhaps cartibulum was said from gerere 'to carry.'

126. Besides there was a third kind of table for vessels, rectangular like the second kind; it was called an urnarium, because it was the piece of furniture in the kitchen on which by preference they set and kept the urnae 'urns' filled with water. From this even now the place in front of the bath where the urn-table is wont to be placed, is called an urnarium. Urnae 'urns' got their name from the fact that they urinant 'dive' in the drawing of water, like an urinator 'diver.' Urinare means to be plunged into water.

127. Amburvum, a pot whose name is made from urvum 'curved,' because it is so bent that it turns up again like the part of the plough which is named the urvum 'beam.' Calix 'cooking-pot,' from caldum 'hot,' because hot porridge was served up in it, and they drank hot liquid from it. The vessel in which they coquebant 'cooked' their food, from that they called a caccabus. Veru 'spit,' from versare 'to turn.'

128. From sedere 'to sit' were named sedes 'seat,' sedile 'chair,' solium 'throne,' sellae 'stools,' siliquastrum 'wicker chair'; then from these subsellium 'bench': as subsipere is said a thing does not sapit 'taste' clearly,

so subsellium because it was not clearly a sella 'stool.' Where two had room on a seat of this sort, it was called a bisellium 'double seat.' An arca 'strong-chest,' because thieves arcebantur 'were kept away' from it when it was locked. Armarium 'closet' and armamentarium 'warehouse,' from the same source, but with different suffixes.

129. Mundus is a woman's toilet set, named from munditia 'neatness.' Ornatus 'toilet set,' as if natus 'born' from the os 'face'; for from this especially is taken that which is to beautify a woman, and therefore this is handled with the help of a mirror. Calamistrum 'curling-iron,' because the hair is arranged with irons when they have been calfacta 'heated' in the embers. The one who attended to them was called a cinerarius ember-man,' from cinis 'embers.' Discerniculum 'bodkin,' with which the hair discernitur 'is parted.' Pecten 'comb,' because by it the hair explicatur 'is spread out.' Speculum 'mirror,' from specere 'to look at,' because in it they spectant 'look at' themselves.

130. Vestis 'garment' from velli 'shaggy hair,' or from the fact that the shorn wool of a sheep, taken as a whole, is a vellus 'fleece': this was said because they formerly vellebant 'plucked' it. Lana 'woollen headband,' because made from lana 'wool.' That which was to hold the hair, was called a reticulum 'net-cap,' from rete 'net'; rete, from raritudo 'looseness of mesh.' Likewise the woven band with which they were to fasten the hair on the head, was called a capital 'headband,' from caput 'head'; and this the sub-priestesses are accustomed to wear on their heads even now. So rica 'veil,' from ritus 'fashion,' because according to the Roman ritus, when women make a sacrifice, they veil their heads. The mitra 'turban' and in general the other things that go on the head, were later importations, along with their Greek names.

131. Next I shall first touch upon those things which are for putting on, then those which are for wrapping about the person. Capitium 'vest,' from the fact that it capit 'holds' the chest, that is, as the ancients said, it comprehendit 'includes' it. One kind of put-on goes subtus 'below,' from which it is called subucula 'underskirt'; a second kind goes supra 'above,' from which it is called supparus 'dress,' unless this is so called because they say it in the same way in Oscan. Of the second sort there are likewise two varieties, one called palla 'outer dress,' because it is outside and palam 'openly' visible; the other is intus 'inside,' from which it is called indusium 'under-dress,' as though intusium, of which Plautus speaks:

Under-dress, a bordered dress, of marigold and saffron hue.

There are many garments which extravagance brought at later times, whose names are clearly Greek, such as asbestinon 'fire-proof.'

132. Amictui 'wrap' is thus named because it is ambiectum 'thrown about,' that is, circumiectum 'thrown around,' from which moreover they gave the name of circumiectui 'throw-around' to that with which women envelop themselves after they are dressed; and any wrap that has a purple edge around

it, they call circumtextum 'edge-weave.' Those of very long ago called a wrap a ricinium 'mantilla'; it was called ricinium from reicere 'to throw back,' because they wore it doubled, throwing back one half of it over the other.

133. Pallia 'cloaks' from this, that they consisted of two single paria 'equal' pieces of cloth, called parilia at first, from which R was eliminated for smoothness of sound. Parapechia 'elbow-stripes,' chlamydes 'mantles,' and many others, are Greek. Laena 'overcoat,' because they contained much lana 'wool,' even like two togas: as the ricinium was the most ancient garment of the women, so this double garment is the most ancient garment of the men.

134. Farming tools which were made for planting or cultivating the crops. Sarculum 'hoe,' from serere 'to plant' and sarire 'to weed.' Ligo 'mattock,' because with this, on account of its width, what is under the ground legitur 'is gathered' more easily. Pala 'spade' from pangere 'to fix in the earth'; the L was originally GL. Rutrum 'shovel,' previously ruitrum, from ruere 'to drop in a heap.'

135. Aratrum 'plough,' because it arruit 'piles up' the earth. Its iron part is called vomer 'ploughshare,' because with its help it the more vomit 'spews up' the earth. The dens 'colter,' because by this the earth is bit; the straight piece of wood which stands above this is called the stiva 'handle,' from stare 'to stand,' and the wooden cross-piece on it is the mani-cula 'hand-grip,' because it is held by the manus 'hand' of the ploughman. That which is so to speak a wagon-tongue between the oxen, is called a bura 'beam,' from boves 'oxen'; others call this an urvum, from the curvum 'curve.' The hole under the middle of the yoke, which is stopped up by inserting the end of the beam, is called coum, from cavum 'hole.' Iugum 'yoke' and iumentum 'yoke-animal,' from iunctus 'joining or yoking.'

136. Irpices 'harrows' are a straight piece of wood with many teeth, which oxen draw just like a wagon, that they may pull up the things that serpunt 'creep' in the earth; they were called sir-pices and afterwards, by some persons, irpices, with the S worn off. Rastelli 'hay-rakes,' like harrows, are saw-toothed instruments, but light in weight; therefore a man in the meadows at haying time corradit 'scrapes together' with this the stalks, from which rasmus 'scraping' they are called rastelli. Rastri 'rakes' are sharp-toothed instruments by which they scratch the earth deep, and eruunt 'dig it up,' from which rutus 'digging' they are called ruastri.

137. Falces 'sickles,' from far 'emmer,' with the change of a letter; in Campania, these are called seculae, from secare 'to cut'; from a certain likeness to these are named others, the falces fenariae 'hay scythes' and arborariae 'tree pruning-hooks,' of obvious origin, and falces lumariae and sirpiculae, whose source is obscure. Lumariae are those with which lumecta are cut, that is when thorns grow up in the fields; because the farmers solvunt 'loosen,' that is, luunt 'loose,' them from the earth, they are called lumecta 'thorn-thickets.' Falces sirpiculae are named from sirpare 'to plait of rushes,' that is, alligare 'to fasten'; thus broken jars are said to have been sirpata 'rush-

covered,' when they are fastened together with rushes. They use rushes in the vineyard for tying up bundles of fuel, cut stakes, and kindling. These sickles they call *zancle* in the peninsular dialect.

138. The *pilum* 'pestle' is so named because with it they *pisunt* 'pound' the spelt, from which the place where this is done is called a *pistrinum* 'mill' — L and S often change places with each other — and from that afterwards *pistrina* 'bakery' and *pistrix* 'woman baker,' words used in Lucilius's City. *Trapetes* are the mill-stones of the olive-mill: they call them *trapetes* from *terere* 'to rub to pieces,' unless the word is Greek; and *molae* from *mollire* 'to soften,' for what is thrown in there is softened by their motion. *Vallum* 'small winnowing-fan,' from *volatus* 'flight,' because when they swing this to and fro the light particles *volant* 'fly' away from there. *Ventilabrum* 'winnowing-fork,' because with this the grain *ventilatur* 'is tossed' in the air.

139. Those means with which field produce and necessary things are transported. Of these, *fiscina* 'rush-basket' was named from *ferre* 'to carry'; *corbes* 'baskets,' from the fact that into them they *corruebant* 'piled up' corn-ears or something else; from this the smaller ones were called *corbulae*. Of those which animals draw, the *tragula* 'sledge,' because it *trahitur* 'is dragged' along the ground by the animal; *sirpea* 'wicker wagon,' which *sirpatur* 'is plaited' of osiers, that is, is woven by binding them together, in which dung or something else is conveyed.

140. *Vehiculum* 'wagon,' in which beans or something else is conveyed, because it *vietur* 'is plaited' or because *vehitur* 'carrying is done' by it. A shorter kind of wagon is called by others, as it were, an *arcera* 'covered wagon,' which is named even in the Twelve Tables; because the wagon was made of boards like an *arca* 'strong box,' it was called an *arcera*. *Plaustrum* 'cart,' from the fact that unlike those which I have mentioned above it is *palam* 'open' not to a certain degree but everywhere, for the objects which are conveyed in it *perlucent* 'shine forth to view,' such as stone slabs, wooden beams, and building material.

141. *Aedificia* 'buildings' are, like many things, named from a part: from *aedes* 'hearths' and *facere* 'to make' comes certainly *aedificium*. *Op-pidum* 'town' also is named from *ops* 'strength,' because it is fortified for *ops* 'strength,' as a place where the people may be, and because for spending their lives there is *opus* 'need' of place where they may be in safety. *Moenia* 'walls' were so named because they *muniebant* 'fortified' the towns with *opus* 'work.' What they *exaggerabant* 'heaped up' that it might be *moenitius* 'better fortified,' was called *aggeres* 'dikes,' and that which was to support the dike was called a *moerus* 'wall.' Because carrying was done for the sake of *munienti* 'fortifying,' the work was a *munus* 'duty'; because they enclosed the town by this *moenus*, it was a *moerus* 'wall.'

142. Its top was called *pinnae* 'pinnacles,' from those feathers which distinguished soldiers are accustomed to wear on their helmets, and among the gladiators the Samnites wear. *Turres* 'towers,' from *torvi* 'fiercely staring

eyes,' because they stand out in front of the rest. Where they left a way in the wall, by which they might portare 'carry' goods into the town, these they called portae 'gates.'

143. Many founded towns in Latium by the Etruscan ritual; that is, with a team of cattle, a bull and a cow on the inside, they ran a furrow around with a plough (for reasons of religion they did this on an auspicious day), that they might be fortified by a ditch and a wall. The place whence they had ploughed up the earth, they called a fossa 'ditch,' and the earth thrown inside it they called the murus 'wall.' The orbis 'circle' which was made back of this, was the beginning of the urbs 'city'; because the circle was post murum 'back of the wall,' it was called a post-moerium; it sets the limits for the taking of the auspices for the city. Stone markers of the pomerium stand both around Aricia and around Rome. Therefore towns also which had earlier had the plough drawn around them, were termed urbes 'cities,' from orbis 'circle' and urvum 'curved'; therefore also all our colonies are mentioned as urbes in the old writings, because they had been founded in just the same way as Rome; therefore also colonies and cities conduntur 'are founded,' because they are placed inside the pomerium.

144. The first town of the Roman line which was founded in Latium, was Lavinium; for there are our Penates. This was named from the daughter of Latinus who was wedded to Aeneas, Lavinia. Thirty years after this, a second town was founded, named Alba; it was named from the alba 'white' sow. This sow, when she had escaped from Aeneas's ship to Lavinium, gave birth to a litter of thirty young; from this prodigy, thirty years after the founding of Lavinium, this second city was established, called Alba Longa 'the Long White City,' on account of the colour of the sow and the nature of the place. From here came Rhea, mother of Romulus; from her, Romulus; from him, Rome.

145. In a town there are vici 'rows,' from via 'street,' because there are buildings on each side of the via. Fundulae 'blind streets,' from fundus 'bottom,' because they have no way out and there is no passage through. Angiportum 'alley,' either because it is angustum 'narrow,' or from agere 'to drive' and portus 'entrance.' The place to which they might conferre 'bring' their contentions and might ferre 'carry' articles which they wished to sell, they called a forum.

146. Where things of one class were brought, a denomination was added from that class, as the Forum Boarium 'Cattle Market,' the Forum Holitorium 'Vegetable Market': this was the old Macellum, where holera 'vegetables' in quantity were brought; such places even now the Spartans call a macellum, but the Ionians call the entrances to gardens "the macellotae of gardens," and speak of the macella 'entrances' to small fortified villages. Along the Tiber, at the sanctuary of Portunus, they call it the Forum Piscarium 'Fish Market'; therefore Plautus says:

Down at the Market that sells the fish.

Where things of various kinds are sold, at the Cornel-Cherry Groves, is the Forum Cuppedinis 'Luxury Market,' from cuppedium 'delicacy,' that is, from fastidium 'fastidiousness'; many call it the Forum Cupidinis 'Greed Market,' from cupiditas 'greed.'

147. After all these things which pertain to human sustenance had been brought into one place, and the place had been built upon, it was called a Macellum, as certain writers say, because there was a garden there; others say that it was because there had been there a house of a thief with the cognomen Macellus, which had been demolished by the state, and from which this building has been constructed which is called from him a Macellum.

148. In the Forum is the Lacus Curtius 'Pool of Curtius'; it is quite certain that it is named from Curtius, but the story about it has three versions: for Procilius does not tell the same story as Piso, nor did Cornelius follow the story given by Procilius. Procilius states that in this place the earth yawned open, and the matter was by decree of the senate referred to the haruspices; they gave the answer that the God of the Dead demanded the fulfilment of a forgotten vow, namely that the bravest citizen be sent down to him. Then a certain Curtius, a brave man, put on his war-gear, mounted his horse, and turning away from the Temple of Concord, plunged into the gap, horse and all; upon which the place closed up and gave his body a burial divinely approved, and left to his clan a lasting memorial.

149. Piso in his Annals writes that in the Sabine War between Romulus and Tatius, a Sabine hero named Mettius Curtius, when Romulus with his men had charged down from higher ground and driven in the Sabines, got away into a swampy spot which at that time was in the Forum, before the sewers had been made, and escaped from there to his own men on the Capitoline; and from this the pool found its name.

150. Cornelius and Lutatius write that this place was struck by lightning, and by decree of the senate was fenced in: because this was done by the consul Curtius, who had M. Genucius as his colleague, it was called the Lacus Curtius.

151. The arx 'citadel,' from arcere 'to keep off,' because this is the most strongly fortified place in the City, from which the enemy can most easily be kept away. The carcer 'prison,' from coercere 'to confine,' because those who are in it are prevented from going out. In this prison, the part which is under the ground is called the Tullianum, because it was added by King Tullius. Because at Syracuse the place where men are kept under guard on account of transgressions is called the Latomiae 'quarries,' from that the word was taken over as lautumia, because here also in this place there were formerly stone-quarries.

152. On the Aventine is the Lauretum 'Laurel-Grove,' called from the fact that King Tatius was buried there, who was killed by the Laurentes 'Laurentines,' or else from the laurea 'laurel' wood, because there was one there which was cut down and a street run through with houses on both sides: just

as between the Sacred Way and the higher part of the Macellum are the Corneta 'Cornel-Cherry Groves,' from corni 'cornel-cherry trees,' which though cut away left their name to the place; just as the Aesculetum 'Oak-Grove' is named from aesculus 'oak-tree,' and the Fagutal 'Beech-tree Shrine' from fagus 'beech-tree,' whence also Jupiter Fagutalis 'of the Beech-tree,' because his shrine is there.

153. Armilustrum 'purification of the arms,' from the going around of the lustrum 'purificatory offering'; and the same place is called the Circus Maximus, because, being the place where the games are performed, it is built up circum 'round about' for the shows, and because there the procession goes and the horses race circum 'around' the turning-posts. Thus in The Story of the Helmet-Horn the following is said at the coming of the soldier, whom they encircle and make fun of:

Why do we refrain from making sport? See, here's our circus-ring. In the Circus, the place from which the horses are let go at the start, is now called the Carceres 'Prison-stalls,' but Naevius called it the Town. Carceres was said, because the horses coercentur 'are held in check,' that they may not go out from there before the official has given the sign. Because the Stalls were formerly adorned with pinnacles and towers like a wall, the poet wrote:

When the Dictator mounts his car, he rides the whole way to the Town.

154. The very centre of the Circus is called ad Murciae 'at Murcia's,' as Procius said, from the urcei 'pitchers,' because this spot was in the potters' quarter; others say that it is derived from murtetum 'myrtle-grove,' because that was there: of which a trace remains in that the chapel of Venus Murtea 'of the Myrtle' is there even to this day. Likewise for a similar reason the Circus Flaminius 'Flaminian Circus' got its name, for it is built circum 'around' the Flaminian Plain, and there also the horses race circum 'around' the turning-posts at the Taurian Games.

155. The Comitium 'Assembly-Place' was named from this, that to it they coibant 'came together' for the comitia curiata 'curiate meetings' and for lawsuits. The curiae 'meeting-houses' are of two kinds: for there are those where the priests were to attend to affairs of the gods, like the old meeting-houses, and those where the senate should attend to affairs of men, like the Hostilian Meeting-House, so called because King Hostilius was the first to build it. In front of this is the Rostra 'Speaker's Stand': of which this is the name — the rostra 'beaks' taken from the enemy's ships have been fastened to it. A little to the right of it, in the direction of the Comitium, is a lower platform, where the envoys of the nations who had been sent to the senate were to wait; this, like many things, was called from a part of its use, being named the Graecostasis 'Stand of the Greeks.'

156. Above the Graecostasis was the Senaculum 'Senate-Stand,' where the Temple of Concord and the Basilica Opimia are; it was called Senaculum as a place where the senate or the seniores 'elders' were to take their places, named like γερουσία 'assembly of elders' among the Greeks. Lautolae

‘baths,’ from lavare ‘to wash,’ because there near the Double Janus there once were hot springs. From these there was a pool in the Lesser Velabrum, from which fact it was called velabrum because there they vehebantur ‘were conveyed’ by skiffs, like that greater Velabrum of which mention has been made above.

157. The Aequimaelium ‘Maelius-Flat,’ because the house of Maelius was aequata ‘laid flat’ by the state since he wished to seize the power and be king. The place Ad Busta Gallica ‘At the Gauls’ Tombs,’ because on the recovery of Rome the bones of the Gauls who had held Rome were heaped up there and fenced in. The place near the Cloaca Maxima which is called Doliola ‘The Jars,’ where spitting is prohibited, from some doliola ‘jars’ that were buried under the earth. Two stories about these are handed down: some say that bones of dead men were in them, others that certain sacred objects belonging to Numa Pompilius were buried in them after his death. The Argiletum, according to some writers, was named from Argus of Larisa, because he came to this place and was buried there; according to others, from the argilla ‘clay,’ because this kind of earth is found at this place.

158. The Clivus Publicius ‘Publician Incline,’ from the members of the Publician gens who as plebeian aediles constructed it by state authority. For like reasons the Clivus Pullius and the Clivus Cosconius, because they are said to have been constructed by men of these names as Street-Overseers. The Incline that goes up close by the Temple of Flora is Old Capitol, because there is in that place a chapel of Jupiter, Juno, and Minerva, and this is older than the temple which has been built on the Capitol.

159. On the Esquiline there is a Vicus Africus ‘African Row,’ because there, it is said, the hostages from Africa in the Punic War were kept under guard. The Vicus Cyprius ‘Good Row,’ from cyprum, because there the Sabines who were taken in as citizens settled, and they named it from the good omen: for cyprum means ‘good’ in Sabine. Near this is the Vicus Sceleratus ‘Accursed Row,’ named from Tullia wife of Tarquin the Proud, because when her father was lying dead in it she ordered her muleteer to drive her carriage on over his body.

160. Since a Row consists of houses, let us now look at the names of these. Domus ‘house’ is a Greek word, and therefore in the temples the room in front of the hall where the abode of the god is the Greeks call πρόδομος ‘front room,’ and that which is behind they call ὀπισθόδομος ‘back room.’ Aedes ‘house,’ from aditus ‘approach,’ because they adibant ‘approached’ it on level footing. Therefore the herald at an announced funeral even says that those who are carried out of any building made of boards, are carried ex aedibus ‘from the house’; and all the country-houses in the census-list we from that fact call aedes.

161. The cavum aedium ‘inner court’ is said of the roofed part which is left open within the house-walls, for common use by all. If in this no place was left which is open to the sky, it was called a testudo ‘tortoise’ from the

likeness to the testudo, as it is at the general's headquarters and in the camps. If some space was left in the centre to get the light, the place into which the rain fell down was called the impluvium, and the place where it ran together up above was called the compluvium; both from pluvia 'rain.' The Tuscanicum 'Tuscan-style' was named from the Tusci 'Etruscans,' after the Romans began to imitate their style of inner court. The atrium 'reception hall' was named from the Etruscans of Atria; for from them the model was taken.

162. Around the inner court the house was divided by walls, making rooms useful for different purposes: where they wished something to be stored away, they called it a cella 'store-room,' from celare 'to conceal'; a penaria 'food-pantry,' where penus 'food' was kept; a cubiculum 'sleeping-chamber,' where they cubabant 'lay down' for rest; where they cenabant 'dined,' they called it a cenaculum 'dining-room,' as even now such rooms are named at Lanuvium in the Temple of Juno, in the rest of Latium, at Falerii, and at Corduba. After they began to take dinner upstairs, all the rooms of the upper story were called cenacula; still later, when they began to have several rooms for dining, they called one the hibernum 'winter-room' of the house, as in camps they speak of the hiberna 'winter camp,' from hiems 'winter'; and on the other hand...

here the model copy lacked two leaves 163.... which worship Porcius means when, speaking of Ennius, he says that he dwelt in the locality of Tutilina. Next comes the Naevian Gate, so called because it is in the Naevian Woods: for the locality where it is, is called by this name. Then the Porta Rauduscula 'Copper Gate,' because it was at one time covered with copper. Copper is called raudus; from this the ancients had it written in their formula for symbolic sales:

Let him strike the balance-pan with a piece of raudus.

From here, the Lavernal Gate, from the altar of Laverna, because her altar is there.

164. Besides, inside the walls, I see, there are gates on the Palatine: the Gate of Mucio, from mugitus 'lowing,' because by it they drove the herds out into the cow-pastures which were then in front of the ancient town; a second called the Romanula 'Little Roman,' named from Rome, which has steps in New Street at the Chapel of Volupia.

165. The third gate is the Janual Gate, named from Janus, and therefore a statue of Janus was set up there, and the binding practice was instituted by Pompilius, as Piso writes in his Annals, that the gate should always be open except when there was no war anywhere. The story that has come down to us is that it was closed when Pompilius was king, and afterwards when Titus Manlius was consul, at the end of the first war with Carthage, and then opened again in the same year.

166. On the subject of beds, the origins of the names, so far as I have observed them, are the following: Lectica 'couch,' because they legebant 'gathered' the straw-coverings and the grass with which to make them, as even now is done in camp; these couches, that they might not be on the earth,

they raised up on these materials; — unless rather from the fact that the ancient Greeks called a bed a λέκτρον. Those who covered up a couch, called the coverings segestria, because the coverings in general were made from the seges ‘wheat-stalks,’ as even now is done in the camp; unless the word is from the Greeks, for there it is στέγαστρον. Because the bed of a dead man fertur ‘is carried,’ our ancestors called it a feretrum ‘bier,’ and the Greeks called it a φέρετρον.

167. After they had passed to the use of culcitae ‘mattresses and pillows,’ because into them they calcabant ‘pressed’ chaff or stuffing or something else, the article was called a culcita from inculcate ‘to press in.’ Whatever they spread upon this, they called a stragulum ‘cover’ from sternere ‘to spread.’ The pulvinar ‘cushioned seat of honour’ they derived either from plumae ‘feathers’ or from pellulae ‘furs.’ That with which they operibantur ‘were covered,’ they called operimenta ‘covers,’ and pallia ‘covers of a Greek sort’ they called opercula. Among these there are many foreign words, such as sagum ‘soldier’s blanket’ and reno ‘cloak of reindeer skin,’ which are Gallic, and gaunaca ‘heavy Oriental cloak’ and amphimallum ‘cloak shaggy on both sides,’ which are Greek; and on the other hand toral ‘valance,’ in front of the torus ‘bolster,’ is Latin, and so in torus ‘bolster,’ from tortum ‘twisted,’ because it is ready for use. From likeness to this is named the torulus ‘knob,’ an ornament on a woman’s head.

168. That by which they scandebant ‘mounted’ by a single scansio ‘step’ into a bed that was not high. they called a scabellum ‘bed step’; that by which they mounted into a higher bed, a scamnum ‘bed steps.’ A double step is called a gradus ‘pace,’ because it gerit ‘carries’ a higher step on the lower. Peristromata ‘bedspreads’ and peripetasmata ‘bed-curtains’ are Greek words, so are other things which are used for banquets as well — and of them there are quite a number.

169. The names of stamped money of bronze and silver are the following: as from aes ‘copper’; dupondius ‘two-as piece’ from duo pondera ‘two weights,’ because one weight was called an assipondium ‘as piece’; this for the reason that an as was a libra ‘unit’ pondo ‘by weight.’ From this the rest were named from the number up to centussis ‘one hundred asses,’ as as when the number is one, tressis from three asses, and so by regular analogy up to nonussis ‘nine asses.’

170. At the number ten this changes, because first there is the decussis from decent asses ‘ten asses,’ second the vicessis ‘twenty asses’ from two decusses, which is customarily pronounced bicessis, from duo ‘two’; the rest harmonize, in that the formation is like tricessis regularly up to centussis, after which there is no special word for larger sums of copper money: for ducenti ‘two hundred’ and higher numbers which are made analogically do not indicate asses any more than they do denarii or any other things.

171. The smallest piece of copper is a sextula, so named because it is the sexta ‘sixth’ part of an ounce. The semuncia ‘half-ounce,’ because it is the

half of an ounce: *se* equals *dimidium* 'half,' as in *selibra* 'half-pound' and *semodius* 'half-peck.' *Uncia* 'ounce,' from *unum* 'one.' *Sextans* 'sixth,' from the fact that it is the sixth part of an *as*, as the *quadrans* 'fourth' is that which is a fourth, and the *triens* 'third' that which is a third. *Semis* 'half-as,' because it is a semi-as, that is, the half of an *as*, as has been said above. The *septunx* 'seven ounces,' contracted from *septem* and *uncia*.

172. The remaining words are less clear, because they are expressed by subtraction, and those elements from which the subtraction is made are such that they keep their last syllables: as that from which one *dempta uncia* 'ounce is taken,' is a *deunx* 'eleven twelfths'; if a *sextans* is taken away, it is a *dextans* 'five sixths'; if a *quadrans* is taken away, it is a *dodrans*; it is a *bes* 'two thirds,' or as it once was, a *des*, if a *triens* is *demptus* 'taken off.'

173. In silver, there are coins called *nummi*, this word from the Sicilians: *denarii*, because they were worth *deni aeris* 'ten asses of copper'; *quinarii*, because they were worth *quint* 'five asses each'; and the *sestertius* 'sesterce,' so called because it is *semis tertius* 'the third half-as.' For the old-time *sesterce* was a *dupondius* and a *semis*; it is also a part of ancient practice, that they should speak of coin in reverse order, so that they named them the *semis tertius* 'two and a half asses,' *semis quartus* 'the fourth half, three and a half asses' *semis quintus* 'the fifth half, four and a half asses.' From *semis tertius* they said *sestertius*.

174. The tenth part of a *nummus denarius* 'silver coin of ten asses' is a *libella*, because the *as* was worth a pound by weight, and the *as* of silver was a small one. The *simbella* is so called because it is the half of a *libella*, as the *semis* is half of an *as*. The *terruncius* 'three-ounce piece,' from *tres unciae* 'three ounces,' because as this is the fourth part of a *libella*, so the *quadrans* is the fourth of an *as*.

175. This same money changes its name: for it can likewise be called *dos* 'dower,' *arrabo* 'earnestmoney,' *merces* 'wages,' *corollarium* 'bonus.' *Dos* 'dower,' if it is given for the purpose of a marriage; this in Greek is *δωτήνη*, for thus the Sicilians call it. From the same comes *donum* 'gift'; for in Greek it is *δόνειον* with the Aeolians, and *δόμα* as others say it, and *δόσις* of the Athenians. *Arrabo* 'earnest-money,' when money is given on this stipulation, that a balance is to be paid: this word likewise is from the Greek, where it is *ἀρράβων*. *Reliquum* 'balance,' because it is the *reliquum* 'remainder' of what is owed.

176. *Damnum* 'loss,' from *demptio* 'taking away,' when less is brought in by the sale of the object than it cost. *Lucrum* 'profit' from *luere* 'to set free,' if more is taken in than will *exsolvere* 'release' the price at which it was acquired. *Detrimentum* 'damage,' from *detritus* 'rubbing off,' because those things which are *trita* 'rubbed' are of less value. From the same *trimentum* comes *intertrimentum* 'loss by attrition,' because two things which have been *trita* 'rubbed' *inter se* 'against each other' are also diminished; from which moreover *intertrigo* 'chafing of the skin' is said.

177. A multa 'fine' is that money named by a magistrate, that it might be exacted on account of a transgression; because the fines are named one at a time, they are called multae as though 'many,' and because of old they called wine multa: thus when the countrymen put wine into a large jar or wine-skin, they even now call it a multa after the first pitcherful has been put in. Poena 'penalty,' from poenire 'to punish' or because it follows post 'after' a transgression. Pretium 'price' is that which is fixed for the purpose of purchase or of evaluation; it is named from the periti 'experts,' because these alone can set a price correctly.

178. If any payment is made for services or for labour, it is merces 'wages,' from merere 'to earn.' What was done by hand and what was paid for the work, were both called manupretium 'workmanship' and 'workman's pay,' from manūs 'hands' and pretium 'price.' Corollarium 'bonus,' if anything is added beyond what is due; this word was made from corollae 'garlands,' because the spectators were in the habit of throwing flowers on the stage when they liked the actors' performance. Praeda 'booty' is that which has been taken from the enemy, because it is parta 'won' by the work of the hands: praeda as though parida. Praemium 'reward,' from praeda 'booty,' because it is granted for something well done.

179. If money is given which is to be paid back, it is a mutuum 'loan,' so called because the Sicilians call it a μῶτος; thus Sophron writes Loan to be repaid.

Also munus 'present,' because those who are on terms of mutuus 'mutual' affection give presents out of kindness; a second munus 'duty,' because it is ordered for the muniendum 'fortification' of the town, from which moreover the municipes 'townspeople' are named, who must jointly perform the munus.

180. If it is that money which comes into court in lawsuits, it is called sacramentum 'sacred deposit,' from sacrum 'sacred': the plaintiff and the defendant each deposited with the pontifex five hundred copper asses for some kinds of cases, and for other kinds the trial was conducted likewise under a deposit of some other fixed amount specified by law; he who won the decision got back his deposit from the temple, but the loser's deposit passed into the state treasury.

181. Tributum 'tribute' was said from the tribus 'tribes,' because that money which was levied on the people, was exacted tributim 'tribe by tribe' individually, in proportion to their financial rating in the census. From this, that money which was allotted was attributum 'assigned'; from this also, those to whom the money was assigned, that they may pay it to the soldiery, were called tribuni aerarii 'treasury tribunes'; that which was assigned, was the aes militare 'soldier's pay-fund'; this is what Plautus means:

Comes the soldier, asks for cash.

And from this comes the term milites aerarii 'paid soldiers,' from the aes 'cash-pay,' because they earned stipends.

182. This very word stipendium 'stipend' is said from stips 'coin,' because

they also called an aes 'copper coin' a stipis; for because the asses were a pound each in weight, those who had received an unusual number of them did not put them in a strongbox, but stipabant 'packed,' that is, componebant 'stored,' them away in some chamber, that they might take up less space; they started the use of the word stipis from stipare 'to pack.' Stipis is perhaps from the Greek word στοιβή 'heap.' This is clear, because, as was then started, so even now they speak of a stipis when they give money to the temple treasuries for the gods, and those who make a contract about money are said to stipulari 'stipulate' and restipulari 'make counter-stipulations.' Therefore the soldier's stipendia 'stipends,' because they pendebant 'weighed' the stipis; from this moreover Ennius writes:

The Phoenicians pay out the stipends.

183. From the same pendere 'to weigh or pay, comes dispensator 'distributing cashier,' and in our accounts we write expensum 'expense' and therefrom the first pensio 'payment' and likewise the second and any others, and dispendium 'loss by distribution,' for this reason, that money is wont to become less in the dispendendo 'distributing of the payments'; compendium 'saving,' which is made when it compenditur 'is weighed all together'; from which the usura interest,' because it was added in 'on' the principal, was called impendium 'outlay'; when it was not added to the principal, it was called usura 'interest' because of the usus 'use' of the money, just as sors 'principal' is said because it becomes one's own by sors 'union.' It was once the custom to pay by the use of a pair of scales; a trace of this remains even now in the Temple of Saturn, because it even now has a pair of scales set up ready for weighing purposes. From aes 'copper money' the Aerarium 'Treasury' was named.

184. What we have thought to pertain to names which are places and those which express things in places, has been, as I think, adequately set forth, because a great many are perspicuous and if we should wish to write further the roll will not permit it. Therefore in the next book, as I said at the beginning of this book, I shall speak of the next topic, namely about times.

BOOK VI

1. The sources of the words which are names of places and are names of those things which are in these places, I have written in the preceding book. In the present book I shall speak about the names of times and of those things which in the performance take place or are said with some time-factor, such as sitting, walking, talking; and if there are any words of a different sort attached to these, I shall give heed rather to the kinship of the words than to the rebukes of my listener.

2. In this subject I rely on Chrysippus as an adequate authority, and on Antipater, and on those in whom there was more learning even if not so much insight, among them Aristophanes and Apollodorus: all these write that words are so derived from words, that the words in some instances take on letters, in others lose them, in still others change them, as in the case of *turdus* 'thrush' takes place in *turdarium* 'thrush-cote' and *turdelix* 'magpie.' Thus the Greeks, in adapting our names, make *Λευκιηνός* of Lucienus and *Κοῖντιος* of Quinctius, and we make Aristarchus of their *Ἀρίσταρχος* and Dio of their *Δίων*. In just this way, I say, our practice has altered many from the old form, as *solum* 'soil' from *solu*, *Liberum* 'God of Wine' from *Loebesom*, *Lares* 'Hearth-Gods' from *Lases*: these words, covered up as they are by lapse of time, I shall try to dig out as best I can.

3. First we shall speak of the time-names, then of those things which take place through them, but in such a way that first we shall speak of their essential nature: for nature was man's guide to the imposition of names. Time, they say, is an interval in the motion of the world. This is divided into a number of parts, especially from the course of the sun and the moon. Therefore from their *temperatus* 'moderated' career, *tempus* 'time' is named, and from this comes *tempestitiva* 'timely things'; and from their *motus* 'motion,' the *mundus* 'world,' which is joined with the sky as a whole.

4. There are two motions of the sun: one with the sky, in that the moving is impelled by Jupiter as ruler, who in Greek is called *Δία*, when it comes from east to west; wherefore this time is from this god called a *dies* 'day.' *Meridies* 'noon,' from the fact that it is the *medius* 'middle' of the *dies* 'day.' The ancients said *D* in this word, and not *R*, as I have seen at Praeneste, cut on a sun-dial. *Solarium* 'sun-dial' was the name used for that on which the hours were seen in the *sol* 'sunlight'; or also there is the water-clock, which Cornelius set up in the shade in the Basilica of Aemilius and Fulvius. The beginning of the day is *mane* 'early morning,' because then the day *manat* 'trickles' from the east, unless rather because the ancients called the good *manum*: from a superstitious belief of the same kind as influences the Greeks, who, when a light is brought, make a practice of saying, "Goodly light!"

5. *Suprema* means the last part of the day; it is from *superrimum*. This time, the Twelve Tables say, is sunset; but afterwards the Plaetorian Law declares that this time also should be 'last' at which the praetor in the

Comitium has announced to the people the suprema 'end of the session.' In line with this, crepusculum 'dusk' is said from creperum 'obscure'; this word they took from the Sabines, from whom come those who were named Crepusci, from Amiternum, who had been born at that time of day, just like the Lucii, who were those born at dawn (prima luce) in the Reatine country. Crepusculum means doubtful: from this doubtful matters are called creperae 'obscure,' because dusk is a time when to many it is doubtful whether it is even yet day or is already night.

6. Nox 'night' is called nox, because, as Pacuvius says, All will be stiff with frost unless the sun break in, because it nocet 'harms'; unless it is because in Greek night is νύξ. When the first star has come out (the Greeks call it Hesperus, and our people call it Vesperugo, as Plautus does:

The evening star sets not, nor yet the Pleiades), this time is by the Greeks called ἑσπέρα, and vesper 'evening' in Latin; just as, because the same star before sunrise is called iubar 'dawn-star,' because it is iubata 'maned,' Pacuvius's herdsman says:

When morning-star appears and night has run her course.

And Ennius's Ajax says:

I see light in the sky — can it be dawn?

7. The time between dusk and dawn is called the nox intempesta 'dead of night, as in the Brutus of Cassius, in the speech of Lucretia:

By dead of night he came unto our home.

Aelius used to say that intempesta means the period when it is not a time for activity, which others have called the concubium 'general rest,' because practically all persons then cubabant 'ere lying down'; others, from the fact that silebatur 'silence was observed,' have called it the silentium 'still' of the night, the time which Plautus likewise calls the conticinium 'general silence': for he writes:

We'll see, I want it done. At general-silence time come back.

8. There is a second motion of the sun, differing from that of the sky, in that the motion is from bruma 'winter's day' to solstitium 'solstice.' Bruma is so named, because then the day is brevissimus 'shortest': the solstitium, because on that day the sol 'sun' seems sistere 'to halt,' on which it is nearest to us. When the sun has arrived midway between the bruma and the solstitium, it is called the aequinoctium 'equinox,' because the day becomes aequus 'equal' to the nox 'night.' The time from the bruma until the sun returns to the bruma, is called an annus 'year,' because just as little circles are anuli 'rings,' so big circuits were called ani, whence comes annus 'year.'

9. The first part of this time is the hiems 'winter,' so called because then there are many imbres 'showers'; hence hibernacula 'winter encampment,'

hibernum 'winter time'; or because then everybody's breath which is breathed out is visible, hiems is from hiatus 'open mouth.' The second season is the ver 'spring,' so called because then the virgulta 'bushes' begin virere 'to become green' and the time of year begins vertere 'to turn or change' itself; unless it is because the Ionians say ἦρ for spring. The third season is the aestas 'summer,' from aestus 'heat'; from this, aestivum 'summer pasture'; unless perhaps it is from the Greek αἶθεσθαι, 'to blaze.' The fourth is the autumnus 'autumn,' named from augere 'to increase' the possessions of men and the gathered fruits, as if auctumnus.

10. As the year is named from the motion of the sun, so the month is named from the motion of the moon, until after departing from the sun she returns again to him. Because the moon was in Greek formerly called μῆνη, whence their μῆνες 'months' — from this word we named the menses 'months.' From menses is named the intermestris 'day between the months,' because they thought that between the last day of the preceding expiring month and the new moon there was a day, which with more care the Athenians called the 'old and new,' because on that day the very last of the old moon and the first beginnings of the new moon can both be seen.

11. A five-year period was called a lustrum, from luere 'to set free,' that is, solvere 'to release,' because in every fifth year the taxes and the voluntary tribute payments were completely discharged, through the activity of the censors. A seclum 'century' was what they called the space of one hundred years, named from senex 'old man,' because they thought this the longest stretch of life for senescendi 'aging' men. Aevum 'eternity,' from an aetas 'period' of all the years (from this comes aeviternum, which has become aeternum 'eternal'): which the Greeks call an αἰών — Chrysippus says that this is <ᾰ>ε<ι> ὄν 'always existing.' From this Plautus says:

All time is not enough for thorough learning, and from this the poets say:
The everlasting temples of the sky.

12. To the division made by nature there have been added the civic names for the days. First I shall give those which have been instituted for the sake of the gods, then those instituted for the sake of men. The dies Agonales 'days of the Agonia,' on which the high-priest sacrifices a ram in the Regia, were named from agon for this reason, because the helper at the sacrifice asks "agone?" 'Shall I do my work?': unless it is from the Greek, where αὐγών means princeps 'leader,' from the fact that the sacrificing is done by a leader of the state and the leader of the flock is sacrificed. The Carmentalia are so named because at that time there are sacrifices and a festival of Carmentis.

13. The Lupercalia was so named because the Luperci make sacrifice in the Lupercal. When the High-priest announces the monthly festivals on the Nones of February, he calls the day of the Lupercalia februatius: for februm is the name which the Sabines give to a purification, and this word is not unknown in our sacrifices; for a goat hide, with a thong of which the young women are flogged at the Lupercalia, the ancients called a februs, and the Lupercalia was

called also Februatia 'Festival of Purification,' as I have shown in the Books of the Antiquities. Quirinalia 'Festival of Quirinus,' from Quirinus, because it is a festival to that god and also of those men who did not get a holiday on their own Furnacalia 'Bakers' Festival.' The Feralia 'Festival of the Dead,' from inferi 'the dead below' and ferre 'to bear,' because at that time they ferunt 'bear' viands to the tomb of those to whom it is a duty to offer ancestor-worship there. The Terminalia 'Festival of Terminus,' because this day is set as the last day of the year; for the twelfth month was February, and when the extra month is inserted the last five days are taken off the twelfth month. The Ecurria 'Horse-Race,' from the equorum cursus 'running of horses'; for on that day they currunt 'run' races in the sports on the Campus Martius.

14. The Liber alia 'Festival of Liber,' because on that day old women wearing ivy-wreaths on their heads sit in all parts of the town, as priestesses of Liber, with cakes and a brazier, on which they offer up the cakes on behalf of any purchaser. In the books of the Salii who have the added name Agonenses, this day is for this reason, perhaps, called rather the Agonia. The Quinquatrus: this day, though one only, is from a misunderstanding of the name observed as if there were five days in it. Just as the sixth day after the Ides is in similar fashion called the Sexatrus by the people of Tusculum, and the seventh day after is the Septimatrus, so this day was named here, in that the fifth day after the Ides was the Quinquatrus. The Tubulustrium 'Purification of the Trumpets' is named from the fact that on this day the tubae 'trumpets' used in the ceremonies lustrantur 'are purified' in Shoemakers' Hall.

15. The Megalesia 'Festival of the Great Mother' is so called from the Greeks, because by direction of the Sibylline Books the Great Mother was brought from King Attalus, from Pergama; there near the city-wall was the Megalesion, that is, the temple of this goddess, whence she was brought to Rome. The Fordicidia was named from fordae cows: a forda cow is one that is carrying an unborn calf; because on this day several pregnant cows are officially and publicly sacrificed in the curiae, the festival was called the Fordicidia from fordae caedendae 'the pregnant (cows) which were to be slaughtered.' The Palilia 'Festival of Pales' was named from Pales, because it is a holiday in her honour, like the Cerialia, named from Ceres.

16. The Vinalia 'Festival of the Wine,' from vinum 'wine'; this is a day sacred to Jupiter, not to Venus. This feast receives no slight attention in Latium: for in some places the vintages were started by the priests, on behalf of the state, as at Rome they are even now: for the special priest of Jupiter makes an official commencement of the vintage, and when he has given orders to gather the grapes, he sacrifices a lamb to Jupiter, and between the cutting out of the victim's vitals and the offering of them to the god he himself first plucks a bunch of grapes. On the gates of Tusculum there is the inscription:

The new wine shall not be carried into the city until the Vinalia has been proclaimed. The Robigalia 'Festival of Robigus' was named from Robigus 'God of Rust'; to this god sacrifice is made along the cornfields, that rust may not seize upon the standing corn.

17. The Vestalia 'Festival of Vesta,' like the Vestal Virgins, from Vesta. The Ides of June are called the Lesser Quinquatrus, from the likeness to the Greater Quinquatrus, because the pipes-players take a holiday, and after roaming through the City, assemble at the Temple of Minerva. The day of Fors Fortuna 'Chance Luck' was named by King Servius Tullius, because he dedicated a sanctuary to Fors Fortuna beside the Tiber, outside the city Rome, in the month of June.

18. The Poplifugia 'People's Flight' seems to have been named from the fact that on this day the people suddenly fled in noisy confusion: for this day is not much after the departure of the Gauls from the City, and the peoples who were then near the City, such as the Ficuleans and Fidenians and other neighbours, united against us. Several traces of this day's flight appear in the sacrifices, of which the Books of the Antiquities give more information. The Nones of July are called the Caprotine Nones, because on this day, in Latium, the women offer sacrifice to Juno Caprotina, which they do under a caprificus 'wild fig-tree'; they use a branch from the fig-tree. Why this was done, the bordered toga presented to them at the Games of Apollo enlightened the people.

19. The Neptunalia 'Festival of Neptune,' from Neptune; for it is the holiday of this god. The Furrinalia 'Festival of Furrina,' from Furrina, for this day is a state holiday for this goddess; honour was paid to her among the ancients, who instituted an annual sacrifice for her, and assigned to her a special priest, but now her name is barely known, and even that to only a few. The Portunalia 'Festival of Portunus' was named from Portunus, to whom, on this day, a temple was built at the portus 'port' on the Tiber, and a holiday instituted.

20. The nineteenth of August was called the Country Vinalia 'Wine-Festival,' because at that time a temple was dedicated to Venus and gardens were set apart for her, and then the kitchen-gardeners went on holiday. The Consualia 'Festival of Consus' was called from Consus, because then there was the state festival to that god, and in the Circus at his altar those games were enacted by the priests in which the Sabine maidens were carried off. The Volcanalia 'Festival of Vulcan,' from Vulcan, because then was his festival and because on that day the people, acting for themselves, drive their animals over a fire.

21. The day named Opeconsiva is called from Ops Consiva 'Lady Bountiful the Planter,' whose shrine is in the Regia; it is so restricted in size that no one may enter it except the Vestal Virgins and the state priest. "When he goes there, let him wear a white veil," is the direction; this suffibulum 'white veil' is named as if sub-figabulum from suffigere 'to fasten down.' The

Volturnalia 'Festival of Volturnus,' from the god Volturnus, whose feast takes place then. In the month of October, the Meditrinalia 'Festival of Meditrina' was named from mederi 'to be healed,' because Flaccus the special priest of Mars used to say that on this day it was the practice to pour an offering of new and old wine to the god, and to taste of the same, for the purpose of being healed; which many are accustomed to do even now, when they say:

Wine new and old I drink, of illness new and old I'm cured.

22. The Fontanalia 'Festival of the Springs,' from Fons 'God of Springs,' because that day is his holiday; on his account they then throw garlands into the springs and place them on the well-tops. The Armilustrum 'Purification of the Arms,' from the fact that armed men perform the ceremony in the Armilustrum, unless the place is rather named from the men; but as I said of them previously, this word comes from ludere 'to play' or from lustrum 'purification,' that is, because armed men went around ludentes 'making sport' with the sacred shields. The Saturnalia 'Festival of Saturn' was named from Saturn, because on this day was his festival, as on the second day thereafter the Opalia, the festival of Ops.

23. The Angeronalia, from Angerona, to whom a sacrifice is made in the Acculeian Curia and of whom this day is a state festival. The Larentine Festival, which certain writers call the Larentalia, was named from Acca Larentia, to whom our priests officially perform ancestor-worship on the sixth day after the Saturnalia, which day is from her called the Day of the Parentalia of Larentine Acca.

24. This sacrifice is made in the Velabrum, where it ends in New Street, as certain authorities say, at the tomb of Acca, because near there the priests make offering to the departed spirits of the slaves: both these places were outside the ancient city, not far from the Little Roman Gate, of which I spoke in the preceding book. Septimontium Day was named from these septem montes 'seven hills,' on which the City is set; it is a holiday not of the people generally, but only of those who live on the hills, as only those who are of some pagus 'country district' have a holiday at the Paganalia 'Festival of the Country Districts.'

25. The fixed days are those of which I have spoken; now I shall speak of the annual festivals which are not fixed on a special day. The Compitalia is a day assigned to the Lares of the highways; therefore where the highways competunt 'meet,' sacrifice is then made at the compita 'crossroads.' This day is appointed every year. Likewise the Latinae Ferae 'Latin Holiday' is an appointed day, named from the peoples of Latium, who had equal right with the Romans to get a share of the meat at the sacrifices on the Alban Mount: from these Latin peoples it was called the Latin Holiday.

26. The Sementivae Ferae 'Seed-time Holiday' is that day which is set by the pontiffs; it was named from the sementis 'seeding,' because it is entered upon for the sake of the sowing. The Paganicae 'Country-District Holiday' was entered upon for the sake of this same agriculture, that the whole pagus

‘country-district’ might hold it in the fields, whence it was called *Paganicae*. There are also appointive holidays which are not annual, such as those which are set without a special name of their own, or with an obvious one, such as is the *Novendialis* ‘Ceremony of the Ninth Day.’

27. About these days this is enough; now let us see to the days which are instituted for the interests of men. The first days of the months are named the *Kalendae*, because on these days the Nones of this month *calantur* ‘are announced’ by the pontiffs on the Capitoline in Announcement Hall, whether they will be on the fifth or on the seventh, in this way: “Juno Covella, I announce thee on the fifth day” or “Juno Covella, I announce thee on the seventh day.”

28. The Nones are so called either because they are always the *nonus* ‘ninth’ day before the Ides, or because the Nones are called the *novus* ‘new’ month from the new moon, just as the Kalends of January are called the new year from the new sun; on the same day the people who were in the fields used to flock into the City to the King. Traces of this status are seen in the ceremonies held on the Nones, on the Citadel, because at that time the high-priest announces to the people the first monthly holidays which are to take place in that month. The Idus ‘Ides,’ from the fact that the Etruscans called them the *Itus*, or rather because the Sabines call them the *Idus*.

29. The days next after the Kalends, the Nones, and the Ides, were called *atri* ‘black,’ because on these days they might not start anything new. *Dies fasti* ‘righteous days, court days,’ on which the praetors are permitted *fari* ‘to say’ any and all words without sin. *Comitiales* ‘assembly days’ are so called because then it is the established law that the people should be in the *Comitium* to cast their votes — unless some holidays should have been proclaimed on account of which this is not permissible, such as the *Compitalia* and the Latin Holiday.

30. The opposite of these are called *dies nefasti* ‘unrighteous days,’ on which it is *nefas* ‘unrighteousness’ for the praetor to say *do* ‘I give,’ *dico* ‘I pronounce,’ *addico* ‘I assign’; therefore no action can be taken, for it is necessary to use some one of these words, when anything is settled in due legal form. But if at that time he has inadvertently uttered such a word and set somebody free, the person is none the less free, but with a bad omen in the proceeding, just as a magistrate elected in spite of an unfavourable omen is a magistrate just the same. The praetor who has made a legal decision at such a time, is freed of his sin by the sacrifice of an atonement victim, if he did it unintentionally; but if he made the pronouncement with a realization of what he was doing, Quintus Mucius said that he could not in any way atone for his sin, as one who had failed in his duty to God and country.

31. The *intercisi dies* ‘divided days’ are those on which legal business is wrong in the morning and in the evening, but right in the time between the slaying of the sacrificial victim and the offering of the vital organs; whence they are *intercisi* because the *fas* ‘right’ *intercedit* ‘comes in between’ at that

time, or because the nefas 'wrong' is intercisum 'cut into' by the fas. The day which is called thus: "When the high-priest has officiated in the Comitium, Right," is named from the fact that on this day the high-priest pronounces the proper formulas for the sacrifice in the presence of the assembly, up to which time legal business is wrong, and from that time on it is right: therefore after this time of day actions are often taken under the law.

32. The day which is called "When the dung has been carried out, Right," is named from this, that on this day the dung is swept out of the Temple of Vesta and is carried away along the Capitoline Incline to a certain spot. The Dies Alliensis 'Day of the Allia' is called from the Allia River; for there our army was put to flight by the Gauls just before they besieged Rome.

33. With this I have finished my account of what pertains to the names of individual days. The names of the months are in general obvious, if you count from March, as the ancients arranged them; for the first month, Martius, is from Mars. The second, Aprilis, as Fulvius writes and Junius also, is from Venus, because she is Aphrodite; but I have nowhere found her name in the old writings about the month, and so think that it was called April rather because spring aperit 'opens' everything. The third was called Mains 'May' from the maiores 'elders,' the fourth Iunius 'June' from the iuniores 'younger men.'

34. Thence the fifth is Quintilis 'July' and so in succession to December, named from the numeral. Of those which were added to these, the prior was called Ianuarius 'January' from the god who is first in order; the latter, as the same writers say, was called Februarius 'February' from the di inferi 'gods of the Lower World,' because at that time expiatory sacrifices are made to them; but I think that it was called February rather from the dies februatus 'Purification Day,' because then the people februatur 'is purified,' that is, the old Palatine town girt with flocks of people is passed around by the naked Luperci.

35. As to what pertains to Latin names of time ideas, let that which has been said up to this point be enough. Now I shall speak of what concerns those things which might be observed as taking place at some special time — such as the following: legisti 'thou didst read,' cursus 'act of running,' ludens 'playing.' With regard to these there are two things which I wish to say in advance: how great their number is, and what features are less perspicuous than others.

36. The inflections of words are of four kinds: one which indicates the time and does not have leges 'thou wilt gather or read,' lege 'read thou,' from lego 'I gather or read'; a second, which has case and does not indicate time, as from lego lectio 'collection, act of reading,' lector 'reader'; the third, which has both, time and case, as from lego legens 'reading,' lecturus 'being about to read'; the third, which has neither, as from lego lecte 'choicely,' lectissime 'most choicely.' Therefore if the primitives of these words amount to one thousand, as Cosconius writes, then from the inflections of these words the

different forms can be five hundred thousand in number for the reason that from each and every primitive word about five hundred forms are made by derivation and inflection.

37. Primitive is the name applied to words like *lego* 'I gather,' *scribo* 'I write,' *sto* 'I stand,' *sedeo* 'I sit,' and the rest which are not from some other word, but have their own roots. On the other hand derivative words are those which do develop from some other word, as from *lego* come *legis* 'thou gatherest,' *legit* 'he gathers,' *legam* 'I shall gather,' and in this fashion from this same word come a great number of words. Therefore, if one has shown the origins of the primitive words, and if these are one thousand in number, he will have revealed at the same time the sources of five hundred thousand separate words; but if without showing the origin of a single primitive word he has shown how the rest have developed from the primitives, he will have said quite enough about the origins of words, since the original elements from which the words are sprung are few and the words which have sprung from them are countless.

38. There are besides an enormous number of words derived from these same original elements by the addition of a few prefixes, because by the addition of prefixes with or without change a word is repeatedly transformed; for as there is *processit* 'he marched forward' and *recessit* 'drew back,' so there is *accessit* 'approached' and *abcessit* 'went off,' likewise *incessit* 'advanced' and *excessit* 'withdrew,' so also *successit* 'went up' and *decessit* 'went away,' *discessit* 'departed' and *concessit* 'gave way.' But if there were only these ten prefixes, from the thousand primitives five million different forms can be made inasmuch as from one word there are five hundred derivational forms and when these are multiplied by ten through union with a prefix five thousand different forms are produced out of one primitive.

39. Democritus, Epicurus, and likewise others who have pronounced the original elements to be unlimited in number, though they do not tell us whence the elements are, but only of what sort they are, still perform a great service: they show us the things which in the world consist of these elements. Therefore if the etymologist should postulate one thousand original elements of words, about which an interpretation is not to be asked of him, and show the nature of the rest, about which he does not make the postulation, the number of words which he would explain would still be enormous.

40. Since I have given a sufficient reminder of the number of existing words, I shall speak briefly about their obscurity. Of the words which also indicate time the most difficult feature is their radicals, for the reason that these have in general no communion with the Greek language, and those to whose birth our memory reaches are not native Latin; yet of these, as I have said, we shall say what we can.

41. I shall start first from the word *ago* 'I drive, effect, do.' *Actio* 'action' is made from *agitalus* 'motion.' From this we say "The tragic actor *agit* 'makes' a gesture," and "The chariot-team *agitantur* 'is driven'"; from this,

"The flock agitur 'is driven' to pasture." Where it is hardly possible for anything agi 'to be driven,' from this it is called an angiportum 'alley'; where nothing can agi 'be driven,' from this it is an angulus 'corner,' or else because in it is a very narrow (angustus) place to which this corner belongs.

42. There are three actiones 'actions,' and of these the first is the agitatus 'motion' of the mind, because we must first cogitare 'consider' those things which we are acturi 'going to do,' and then thereafter say them and do them. Of these three, the common folk practically never thinks that cogitatio 'consideration' is an action; but it thinks that the third, in which we do something, is the most important. But also when we cogitamus 'consider' something and agitamus 'turn it over' in mind, we agimus 'are acting,' and when we make an utterance, we agimus 'are acting.' Therefore from this the orator is said agere 'to plead' the case, and the augurs are said agere 'to practice' augury, although in it there is more saying than doing.

43. Cogitare 'to consider' is said from cogere 'to bring together': the mind cogit 'brings together' several things into one place, from which it can choose. Thus from milk that is coactum 'pressed,' caseus 'cheese' was named; thus from men brought together was the contio 'mass meeting' called, thus coemptio 'marriage by mutual sale,' thus compitum 'cross-roads.' From cogitatio 'consideration' came concilium 'council,' and from that came consilium 'counsel'; and the concilium is said conciliari 'to be brought into unity' like a garment when it cogitur 'is pressed' at the cleaner's.

44. Thus reminisci 'to recall,' when those things which have been held by mind and memory are fetched back again by considering (cogitando). From this also comminisci 'to fabricate a story' is said, from con 'together' and mens 'mind,' when things which are not, are devised in the mind; and from that comes the word eminisci 'to use the imagination,' when the commentum 'fabrication' is uttered. From the same word mens 'mind' come meminisse 'to remember' and amens 'mad,' said of one who has departed a mente 'from his mind.'

45. From this moreover metus 'fear,' from the mens 'mind' somehow mota 'moved,' as metuisti 'you feared,' equal to te amovisti 'you removed yourself.' So, because timor 'fear' is cold, tremuisti 'you shivered' is equal to timuisti 'you feared.' Tremo 'I shiver' is said from the similarity to the behaviour of the voice, which is evident then when people shiver very much, when even the hairs on the body bristle up like the beard on an ear of barley.

46. Curare 'to care for, look after' is said from cura 'care, attention.' Cura, because it cor urat 'burns the heart'; curiosus 'inquisitive,' because such a person indulges in cura beyond the proper measure. Recordari 'to recall to mind,' is revocare 'to call back' again into the cor 'heart.' The curiae 'halls,' where the senate curat 'looks after' the interests of the state, and also there where there is the cura 'care' of the state sacrifices; from these, the curiones 'priests of the curiae.'

47. Volo 'I wish' is said from voluntas 'free-will' and from volatus 'flight,'

because the spirit is such that in an instant it pervolat 'flies through' to any place whither it volt 'wishes.' Lubere 'to be pleasing' is said from labi 'to slip,' because the mind is lubrica 'slippery' and prolabitur 'slips forward,' as of old they used to say. From lubere 'to be pleasing' come libido 'lust,' libidinosus 'lustful,' and Venus Libentina 'goddess of sensual pleasure' and Libitina 'goddess of the funeral equipment,' so also other words.

48. Metuere 'to fear,' from a certain motus emotion' of the spirit, when the mind shrinks back from that misfortune which it thinks will fall upon it. When from excessive violence of the emotion it is borne foras 'forth' so as to go out of itself, there is formido 'terror'; when parum movetur' the emotion is not very strong,' it pavet 'dreads,' and from this comes pavor 'dread.'

49. Meminisse 'to remember,' from memoria 'memory,' when there is again a motion toward that which remansit 'has remained' in the mens 'mind': and this may have been said from manere 'to remain,' as though manimoria. Therefore the Salii, when they sing Mamurius Veturius, indicate a memoria vetus 'memory of olden times.' From the same is monere 'to remind,' because he who monet 'reminds,' is just like a memory. So also the monimenta 'memorials' which are on tombs, and in fact alongside the highway, that they may admonere 'admonish' the passers-by that they themselves were mortal and that the readers are too. From this, the other things that are written and done to preserve their memoria 'memory' are called monimenta 'monuments.'

50. Maerere 'to grieve,' was named from marcere 'to wither away,' because the body too would marcescere 'waste away'; from this moreover the macri 'lean' were named. Laetari 'to be happy,' from this, that joy is spread latins 'more widely' because of the idea that it is a great blessing. Therefore Juventius says:

Should all men bring their joys into a single spot, My happiness would yet surpass the total lot.

When things are of this nature, they are said to be laeta 'happy.'

51. Narro 'I narrate,' when I make a second person narus 'acquainted with' something; from which comes narratio 'narration,' by which we make acquaintance with an occurrence. This part of acting is in the section of saying, and the words are united with time-ideas or are from them: those of this sort seem to be radicals.

52. That man fatur 'speaks' who first emits from his mouth an utterance which may convey a meaning. From this, before they can do so, children are called infantes 'non-speakers, infants'; when they do this, they are said now fari 'to speak'; not only this word, but also, from likeness to the utterance of a child, fariolus 'soothsayer' and fatuus 'prophetic speaker' are said. From the fact that the Birth-Goddesses by fando 'speaking' then set the life-periods for the children, fatum 'fate' is named, and the things that are fatales 'fateful.' From this same word, those who fantur 'speak' easily are called facundi 'eloquent,' and those who are accustomed fari 'to speak' the future through presentiment, are called fatidici 'sayers of the fates'; they likewise are said

vaticinari 'to prophesy,' because they do this with frenzied mind: but this will have to be taken up later, when we speak about the poets.

53. From this the dies fasti 'righteous days, court days,' on which the praetors are permitted fari 'to speak' without sin certain words of legal force; from this the nefasti 'unrighteous days,' on which it is not right for them to speak them, and if they have spoken these words, they must make atonement. From this those words are called effata 'pronounced,' by which the augurs have effati 'pronounced' the limit that the fields outside the city are to have, for the observance of signs in the sky; from this, the areas of observation are said effari 'to be pronounced'; by the augurs, the boundaries effantur 'are pronounced' which are attached to them.

54. From this the fana 'sanctuaries' are named, because the pontiffs in consecrating them have fati 'spoken' their boundary; from this, profanum 'being before the sanctuary,' which applies to something that is in front of the sanctuary and joined to it; from this, anything in the sacrifice, and especially Hercules's tithe, is called profanatum 'brought before the sanctuary, dedicated,' from this fact that it fanatur 'is consecrated' by some sacrifice, that is, that it becomes by law the property of the sanctuary. This is called polluctum 'offered up,' a term which is shaped from porricere 'to lay before': for when from articles of commerce first fruits are laid before Hercules, on his altar, then there is a polluctum 'offering-up,' just as, when profanatum is said, it is as if the thing had become the sanctuary's property. So formerly all that was profanatum 'dedicated' used to be consumed in the sanctuary, as even now is done with that which the City Praetor offers every year, when on behalf of the state he sacrifices a heifer to Hercules.

55. From the same word fari 'to speak,' the fabulae 'plays,' such as tragedies and comedies, were named. From this word, those persons have fassi 'admitted' and confessi 'confessed,' who have fati 'spoken' that which was asked of them. From this, professi 'openly declared'; from this, fama 'talk, rumour,' and famosi 'much talked of, notorious.' From the same, falli 'to be deceived,' but also falsum 'false' and fallacia 'deceit,' which are so named on this account, that by fando 'speaking' one misleads someone and then does the opposite of what he has said. Therefore if one fallit 'deceives' by an act, in this there is not fallacia 'deceit' in its own proper meaning, but in a transferred sense, as from our pes 'foot' the pes 'foot' of a bed and of a beet are spoken of. From this, moreover, famigerabile 'worth being talked about,' and in this fashion other compounded words, just as there are many derived words, among which are Fatuus 'god of prophetic speaking' and the Fatuae 'women of prophecy.'

56. Loqui 'to talk,' is said from locus 'place.' Because he who is said to speak now for the first time, utters the names and other words before he can say them each in its own locus 'place,' such a person Chrysippus says does not loqui 'talk,' but quasi-talks; and that therefore, as a man's sculptured bust is not the real man, so in the case of ravens, crows, and children making their

first attempts to speak, their words are not real words, because they are not talking. Therefore he loquitur 'talks,' who with understanding puts each word in its own place, and he has then prolocutus 'spoken forth,' when he has by loquendo 'talking' expressed what he had in his spirit.

57. From this, they are said eloqui 'to speak forth' and reloqui 'to speak in reply' in the Sabine sanctuaries, who loquuntur 'speak' from the chamber of the God. From this he was called loquax 'talkative,' who talked too much; from this, eloquens 'eloquent,' who talks profusely; from this, colloquium 'conference,' when persons come into one place for the purpose of talking; from this, they say that women go adlocutum 'to talk to her,' when they go to someone, to talk for purposes of consolation; from this, a word which we utter in talking has been by some called a loquela 'talk-unit.' To talk concinne 'neatly' is said from concinere 'to harmonize,' where the parts agree with each other in such a way that they mutually concinunt 'harmonize' one with another.

58. Pronuntiare 'to make known publicly' is said from pro and nuntiare 'to announce'; pro means the same as ante 'before,' as in proludit 'he plays beforehand.' Therefore actors are said pronuntiare 'to declaim,' because they enuntiant 'make known' on the proscaenium 'stage' the poet's thoughts; and the word is used with the most literal meaning, when they act a new play. For a nuntius 'messenger' was named from novae res 'new things,' which is perhaps derived from a Greek word; from this, accordingly, their Neapolis 'New City' was called Nova-polis 'New-polis' by the old-time Romans.

59. From this, moreover, novissimum 'newest' also began to be used popularly for extremum 'last,' a use which within my memory both Aelius and some elderly men avoided, on the ground that this superlative of the word was too new a formation; its origin is just like vetustius 'older' and veterrimum 'oldest' from vetus 'old,' thus from novum were derived novius 'newer' and novissimum, which means 'last.' So, from the same origin, novitas 'newness' and novicius 'novice' and novalis 'ploughed anew' in the case of a field, and a part of the buildings in the Forum was called sub Novis 'by the New Shops'; though it has had the name for a very long time, as has the Nova Via 'New Street,' which has been an old street this long while.

60. From this can be said also nominare 'to call by name,' because when novae 'new' things were brought into use, they set nomina 'names' on them, by which they novissent 'might know' them. From this, nuncupare 'to pronounce vows publicly,' because then nova 'new' vows are undertaken for the state. That nuncupare is the same as nominare, is evident in the laws, where sums of money are written down as nuncupatae 'bequeathed by name'; likewise in the Chorus, in which there is:

Aeneas! — Who is this who calls me by my name? And likewise in the Medus:

Who are you, woman, who have called me by an unaccustomed name?

61. Dico 'I say' has a Greek origin, that which the Greeks call δεικνύω 'I

show.' From this moreover comes dicare 'to show, dedicate,' as Ennius says:

I say this circus shows six little turning-posts.

From this, iudicare 'to judge,' because then ius 'right' dicitur 'is spoken'; from this, index 'judge,' because he ius dicat 'speaks the decision' after receiving the power to do so; from this, dedicat 'he dedicates,' that is, he finishes the matter by dicendo 'saying' certain fixed words: for thus a temple of a god dedicatur 'is dedicated' by the magistrate, by dicendo 'saying' the formulas after the pontiff. From this, that is from dicere, comes indicium 'information'; from this, the following: indicit 'he declares' war, indixit 'he has invited to' a funeral, prodixit 'he has postponed' the day, addixit 'he has awarded' the decision; from this was named a dictum 'bon mot' in a farce, and dictiosus 'witty person'; from this, in the companies of soldiers in camp, the dicta 'orders' of the leaders; from this, the dictata 'dictation exercises' in the school; from this, the dictator 'dictator,' as master of the people, because he must dici 'be appointed' by the consul; from this, those old phrases addiciummo 'to be made over to somebody for a shilling,' and dicis causa 'for the sake of judicial form,' and addictus 'bound over' to somebody.

62. If I dico 'say' something that I know to one who does not know it, because I trado 'hand over' to him what he was ignorant of, from this is derived doceo 'I teach,' or else because when we docemus 'teach' we dicimus 'say,' or else because those who docentur 'are taught' inducuntur 'are led on' to that which they docentur 'are taught.' From this fact, that he knows how ducere 'to lead,' is named the one who is dux 'guide' or ductor 'leader'; from this, doctor 'teacher,' who so inducit 'leads on' that he docet 'teaches.' From ducere 'to lead,' come docere 'to teach,' disciplina 'instruction,' discere 'to learn,' by the change of a few letters. From the same original element comes documenta 'instructive examples,' which are said as models for the purpose of teaching.

63. Disputatio 'discussion' and computatio 'reckoning,' from the general idea of putare, which means to make purum 'clean'; for the ancients used putum to mean purum. Therefore putator 'trimmer', because he makes trees clean; therefore a business account is said putari 'to be adjusted,' in which the sum is pura 'net.' So also that discourse in which the words are arranged pure 'neatly,' that it may not be confused and that it may be transparent of meaning, is said disputare 'to discuss' a problem or question.

64. Our word disserit is used in a figurative meaning as well as in relation to the fields: for as the kitchen-gardener disserit 'distributes' the things of each kind upon his garden plots, so he who does the like in speaking is disertus 'skilful.' Sermo 'conversation,' I think, is from series 'succession,' whence certa 'garlands'; and moreover in the case of a garment sartum 'patched,' because it is held together: for sermo 'conversation' cannot be where one man is alone, but where his speech is joined with another's. So we are said conserere manum 'to join hand-to-hand fight' with an enemy; so to call for manum consortum 'a laying on of hands' according to law; from this,

adserere manu in libertatem 'to claim that so-and-so is free,' when we lay hold of him. So the augurs say:

If you authorize me to take in my hand the sacred bough, then name my colleagues (consortes).

65. From this, moreover, sors 'lot,' from which the consortes 'colleagues' themselves are named; from this, further, sortes 'lots,' because in them time-ideas are joined with men and things; from these, the sortilegi 'lot-pickers, fortune-tellers'; from this, the money which is at interest is the sors 'principal, because it joins one expense to another.

66. Legere 'to pick or read,' because the letters leguntur 'are picked' with the eyes; therefore also legati 'envoys,' because they leguntur 'are chosen' to be sent on behalf of the state. Likewise, from legere 'to pick,' the leguli 'pickers,' who legunt 'gather' the olives or the grapes; from this, the legumina 'beans' of various kinds; moreover, the leges 'laws,' which are lectae 'chosen' and brought before the people for them to observe. From this, legitima 'lawful things'; and collegae 'colleagues,' who have been lecti 'chosen' together, and those who have been put into their places, are sublecti 'substitutes'; those added are allecti 'chosen in addition,' and things which have been lecta 'gathered' from several places into one, are collecta 'collected.' From legere 'to gather' comes also ligna 'firewood,' because the wood that had fallen was gathered in the field, to be used on the fireplace. From the same source, legere 'to gather,' came legio 'legion,' and diligens 'careful,' and dilectus 'military levy.'

67. From likeness to the sound, he is said murmurari 'to murmur,' who speaks so softly that he seems more as the result of the sound to be doing it, than to be doing it for the purpose of being understood. From this, moreover, the poets say Murmuring sea-shore.

Likewise, fremere 'to roar,' gemere 'to groan,' clamare 'to shout,' crepare 'to rattle' are said from the likeness of the sound of the word to that which it denotes. From this, that passage:

Arms are resounding, a roar doth arise.

From this, also, By your rebuking you alarm me not.

68. Close to these are quiritare 'to shriek,' iubilare 'to call joyfully.' He is said quiritare, who shouts and implores the protection of the Quirites. The Quirites were named from the Curenses 'men of Cures'; from that place they came with King Tatius to receive a share in the Roman state. As quiritare is a word of city people, so iubilare is a word of the countrymen; thus in imitation of them Aprissius says:

Oho, Fat-Face! — Who is calling me? — Your neighbour of long standing.

So triumphare 'to triumph' was said, because the soldiers shout "Oho, triumph!" as they come back with the general through the City and he is going up to the Capitol; this is perhaps derived from θρίαμβος, as a Greek surname of Liber.

69. Spondere is to say spondeo 'I solemnly promise,' from sponte 'of one's

own inclination': for this has the same meaning as from voluntas 'personal desire.' Therefore Lucilius writes of the Cretan woman, that when she had come of her own desire to his house to lie with him, she was of her own sponte 'inclination' led to throw back her tunic and other garments. The same voluntas 'personal desire' is what Terence means when he says that it is better Of one's own inclination right to do, Than merely by the fear of other folk.

From the same sponte from which spondere is said, are derived despondet 'he pledges' and respondet 'he promises in return, answers,' and desponsor 'promiser' and sponsa 'promised bride,' and likewise others in the same fashion. For he spondet 'solemnly promises' who says of his own sponte 'inclination' spondeo 'I promise'; he who sponondit 'has promised' is a sponsor 'surety'; he who is by sponsus 'formal promise' bound to do the same thing as the other party, is a consponsus 'co-surety.'

70. This is what Naevius means when he says consponsi. If money or a daughter spondebatur 'was promised' in connexion with a marriage, both the money and the girl who had been desponsa 'pledged' were called sponsa 'promised, pledged'; the money which had been asked under the sponsus 'engagement' for their mutual protection against the breaking of the agreement, was called a sponsio 'guarantee deposit'; the man to whom the money or the girl was desponsa 'pledged,' was called sponsus 'betrothed'; the day on which the engagement was made, was called sponsalis 'betrothal day.'

71. He who spononderat 'had promised' his daughter, they said, despondisse 'had promised her away,' because she had gone out of the power of his sponte 'inclination,' that is, from the control of his voluntas 'desire': for even if he wished not to give her, still he gave her, because he was bound by his sponsus 'formal promise': for you see it said, as in comedies:

Do you now promise your daughter to my son as wife?

This was at that time considered a principle established by the praetors to supplement the statutes, and a decision of the censors for the sake of fairness. So a person is said despondisse animum 'to have promised his spirit away, to have become despondent,' just as he is said despondisse filiam 'to have promised his daughter away,' because he had fixed an end of the power of his sponte 'inclination.'

72. Since spondere was said from sua sponte dicere 'to say of one's own inclination,' they said also respondere 'to answer,' when they responderunt 'promised in return' to the other party's spontem, 'inclination,' that is, to the desire of the asker. Therefore he who says "no" to that which is asked, does not respondere, just as he does not spondere who has immediately said spondeo, if he said it for a joke, nor can legal action be taken against him as a result of such a sponsus 'promise.' Thus he to whom someone says in a comedy, Do you recall you pledged your daughter unto me?

which he had said without his sponte 'inclination,' cannot be proceeded against under his sponsus.

73. Spes 'hope' is perhaps also derived from sponte 'inclination,' because a

person then sperat 'hopes,' when he thinks that what he wishes is coming true; for if he thinks that what he does not wish is coming true, he fears, not hopes. Therefore these also who speak in the Astraba of Plautus:

Follow now closely, Polybadiscus, I wish to overtake my hope. — Heavens I surely do: I'm glad to overtake her whom I hope:

because they speak without sponte 'feeling of success,' the youth who speaks does not truly 'hope,' nor does the girl who is 'hoped for.'

74. Sponsor and praes and vas are not the same thing, nor are the matters identical from which these terms come; but they develop out of similar situations. Thus a praes is one who is asked by the magistrate that he praestat 'make a guarantee' to the state; from which, also when he answers, he says, "I am your praes." He was called a vas 'bondsman' who promised bond for another. It was the custom, that when a party in a suit was not considered capable of fulfilling his engagements, he should give another as bondsman for him; from which they later began to provide by law against those who should sell their real estate, that they should not offer themselves as bondsmen. From this, they began to add the provision in the law about the transfer of properties, that "they should not demand a bondsman, nor will a bondsman be given."

75. Canere 'to sing,' accanit 'he sings to' something, and succanit 'he sings a second part,' like canto 'I sing' and cantatio 'song,' from Camena 'Muse,' with N substituted for M. From the fact that a person sings once, he canit; if he sings more often, he cantat. From this, cantitat 'he sings repeatedly,' and likewise other words; nor without canere 'singing, playing' are the tubicines 'trumpeters,' named, and the liticines 'cornetists,' cornicines 'horn-blowers,' tibicines 'pipes-players': for canere 'playing' on some special instrument belongs to all these. The bucinator 'trumpeter' also was named from the likeness of the sound and the cantus 'playing.'

76. Oro 'I beseech' was so called from os 'mouth,' and so were perorat 'he ends his speech' and exorat 'he gains by pleading,' and oratio 'speech' and orator 'speaker' and osculum 'kiss.' From the same, omen 'presage' and ornamentum 'ornament': because the former was first uttered from the os 'mouth,' it was called osmen; the latter is now commonly used in the singular with the general idea of ornament, but as formerly most of the scenic poets use it in the plural. From this, oscines 'singing birds' are spoken of among the augurs, which indicate their premonitions by the os 'mouth.'

77. The third stage of action is, they say, that in which they faciunt 'make' something: in this, on account of the likeness among agere 'to act' and facere 'to make' and gerere 'to carry or carry on,' a certain error is committed by those who think that it is only one thing. For a person can facere something and not agere it, as a poet facit 'makes' a play and does not act it, and on the other hand the actor agit 'acts' it and does not make it, and so a play fit 'is made' by the poet, not acted, and agitur 'is acted' by the actor, not made. On the other hand, the general, in that he is said to gerere 'carry on' affairs, in this

neither facit 'makes' nor agit 'acts,' but gerit 'carries on,' that is, supports, a meaning transferred from those who gerunt 'carry' burdens, because they support them.

78. In its literal sense facere 'to make' is from facies 'external appearance': he is said facere 'to make' a thing, who puts a facies 'external appearance' on the thing which he facit 'makes.' As the factor 'image-maker,' when he says "Fingo 'I shape,'" puts a figura 'shape' on the object, and when he says "Formo 'I form,'" puts a forma 'form' on it, so when he says "Facio 'I make,'" he puts a, facies 'external appearance' on it; by this external appearance there comes a distinction, so that one thing can be said to be a garment, another a dish, and likewise the various things that are made by the carpenters, the image-makers, and other workers. He who furnishes a service, whose work does not stand out in concrete form so as to come under the observation of our physical senses, is, from his agitatatus 'action, motion,' as I have said, thought rather agere 'to act' than facere 'to make' something; but because general practice has used these words indiscriminately rather than with care, we use them in transferred meanings; for he who dicit 'says' something, we say facere 'makes' words, and he who agit 'acts' something, we say is not inficiens 'failing to do' something.

79. And he who lights a faculam 'torch,' is said to facere 'make' a light. Lucere 'to shine,' from luere 'to loose,' because it is also by the light that the shades of night dissolvuntur 'are loosed apart'; from lux 'light' comes Noctiluca 'Shiner of the Night,' because this worship was instituted on account of the loss of the daylight. Acquirere 'to acquire' is ad 'in addition' and quaerere 'to seek'; quaerere itself is from this, that attention is given to quae res 'what thing' is to be got back; from quaerere comes quaestio 'question'; then from these, quaestor 'investigator, treasurer.'

80. Video 'I see,' from visus 'sight,' this from vis 'strength'; for the greatest of the five senses is in the eyes. For while no one of the senses can feel that which is a mile away, the strength of the sense of the eyes reaches even to the stars. From this:

They watch for what is to be seen, but hate to stay awake.

Also the verse of Accius: When that he violated with his eyes, Who looked upon what ought not to be seen From which moreover they used to say violavit 'he did violence to' a girl instead of vitiavit 'ruined' her; and similarly, with the same modesty, they used to say rather that a man fuit 'was' with a woman, than that he concubuit 'lay' with her.

81. Cerno has the same meaning; therefore Ennius uses it for video:

I see light in the sky — can it be dawn?

Cassius says:

I see that in her limbs there's feeling still and motion.

Cerno 'I see' is said from cereo, that is, creo 'I create'; it is said from this fact, that when something has been created, then finally it is seen. From this, the boundary-lines of the parted hair, because a boundary-line is seen, got the

name *discrimen* 'separation'; and the *cernito* 'let him decide,' which is in a will, that is, make them see that you are heir: therefore in the *cretio* 'decision' they direct that the heir bring witnesses. From the same is that which *Medea* says:

I'd rather thrice decide, in battle wild, My life or death, than bear but once a child.

Because, when they *decernunt* 'decide' about life at that time, the end of many persons' lives is seen.

82. *Spectare* 'to see' is said from the old word *specere*, which in fact *Ennius* used:

After *Epulo* saw them, and because in the taking of the auspices there is a division into those who have the *spectio* 'watch-duty' and those who have not; and because in the taking of the auguries even now the augurs say *specere* 'to watch' a bird. Common practice even now keeps the compounds made with prefixes, as *aspicio* 'I look at,' *conspicio* 'I observe,' *respicio* 'I look back at,' *suspicio* 'I look up at,' *despicio* 'I look down upon,' and similarly others; in which group is also *expecto* 'I look for, expect' that which I wish *spectare* 'to see.' From this, *specular* 'I watch'; from this, *speculum* 'mirror,' because in it we *specimus* 'see' our image. *Specula* 'look-out,' that from which we *prospicimus* 'look forth.' *Speculator* 'scout,' whom we send ahead, that he *respiciat* 'may look attentively' at what we wish. From this, the instrument with which we anoint our eyes by which we *specimus* 'see,' is called a *specillum* 'eye-spatula.'

83. From the *aures* 'ears' seem to have been said the words *audio* 'I hear' and *ausculto* 'I listen, heed'; *aures* 'ears' from *aveo* 'I am eager,' because with these we are ever eager to learn, which *Ennius* seems to wish to show as the radical in his *Alexander*, when he says:

A long time eager have been my spirit and my ears, Awaiting eagerly some message from the games.

It is on account of this eagerness of the ears that the theatres are filled. From *audire* 'to hear' is derived also *auscultare* 'to listen, heed,' because they are said *auscultare* who obey what they have heard; from which comes the poet's saying:

I hear, but do not heed.

With the change of a letter are formed *odor* or *olor* 'smell'; from this, *olet* 'it emits an odour,' and *odorari* 'to detect by the odour,' and *odoratus* 'perfumed,' and an *odora* 'fragrant' thing, and similarly other words.

84. With the mouth *edo* 'I eat,' *sorbeo* 'I suck in,' *bibo* 'I drink,' *poto* 'I drink.' *Edo* from Greek *ἔδω* 'I eat'; from this, *esculentum* 'edible' and *esca* 'food' and *edulia* 'eatables'; and because in Greek it is *γεύεται* 'he tastes,' in Latin it is *gustat*. *Sorbere* 'to suck in,' and likewise *bibere* 'to drink,' from the sound of the word, as for water *fervere* 'to boil' is from the sound like the action. From the same language, because there it is *πότον* 'drink,' is *potio* 'drink,' whence *poculum* 'cup,' *potatio* 'drinking-bout,' *repotia* 'next day's

drinking.’ From the same comes puteus ‘well,’ because the old Greek word was like this, and not φρέαρ as it is now.

85. From manus ‘hand’ comes manupretium ‘workman’s wages’; Mancipium ‘possession of property,’ because it capitur ‘is taken’ manu ‘in hand’; manipulus ‘maniple,’ because it unites several manus ‘hands’; manipularis ‘soldier of a maniple,’ manica ‘sleeve.’ Manubrium ‘handle,’ because it is grasped by the manus ‘hand.’ Mantelium ‘towel,’ on which the manus ‘hands’ terguntur ‘are wiped.’...

86. Now first I shall put down some extracts from the Censors’ Records:

When by night the censor has gone into the sacred precinct to take the auspices, and a message has come from the sky, he shall thus command the herald to call the men: “May this be good, fortunate, happy, and salutary to the Roman people — the Quirites — and to the government of the Roman people — the Quirites — and to me and my colleague, to our honesty and our office: All the citizen soldiers under arms and private citizens as spokesmen of all the tribes, call hither to me with an inlicium ‘invitation,’ in case any one for himself or for another wishes a reckoning to be given.”

87. The herald calls them first in the sacred precinct, afterwards he calls them likewise from the walls. When it is dawn, the censors, the clerks, and the magistrates are anointed with myrrh and ointments. When the praetors and the tribunes of the people and those who have been called to the invitation meeting have come, the censors cast lots with each other, as to which one of them shall conduct the ceremony of purification. When the sacred precinct has been determined, then after that he who is to perform the purification conducts the assembly.

88. In the Consular Commentaries I have found the following account:

He who is about to summon the citizen-army, shall say to his assistant, “Gaius Calpurnius, call all the citizens hither to me, with an inlicium ‘invitation.’” The assistant speaks thus: “All citizens, come ye hither to the judges, to an invitation meeting.” “Gaius Calpurnius,” says the consul, “call all the citizens hither to me, to a gathering.” The assistant speaks thus: “All citizens, come hither to the judges, to a gathering.” Then the consul makes declaration to the army: “I order you to go by the proper way to the centuriate assembly.”

89. Why the latter speaks to the accensus ‘assistant’ and the former to the herald — this is the reason: in some affairs the accensus ‘assistant’ acciebat ‘gave the call’ just like a herald, from which the accensus also got his name. That the accensus was accustomed ciere ‘to give the call,’ is shown by the Boeotia, a comedy which some say is a work of Plautus, and others say is a work of Aquilius, in this verse:

Soon as the aide had called that ’twas the hour of noon.

Cosconius records the same in his work on Civil Cases, that the praetor had the habit of ordering his accensus, at the time when he thought that it is the third hour, to call out that it is the third hour, and likewise midday and the

ninth hour.

90. That someone was regularly sent around the walls, *inlicere* 'to entice' the people to that place from which he might call them to the gathering, not only before the consuls and the censors, but also before the quaestors, is shown by an old Commentary on the Indictment which the quaestor Manius Sergius son of Manius brought against Trogus, accusing him of a capital offence; in which there is the following:

91. You shall give your attention to the auspices, and take the auspices in the sacred precinct; then you shall send to the praetor or to the consul the favourable presage which has been sought. The praetor shall call the accused to appear in the assembly before you, and the herald shall call him from the walls: it is proper to give this command. A horn-blower you shall send to the doorway of the private individual and to the Citadel, where the signal is to sound. Your colleague you shall request that from the speaker's stand he proclaim an assembly, and that the bankers shut up their shops. You shall seek that the senators express their opinion, and bid them be present; you shall seek that the magistrates express their opinion, the consuls, the praetors, the tribunes of the people, and your colleagues, and you shall bid them all be present in the temple; and when you send the request, you shall summon the gathering.

92. In the same Commentary on the Indictment, this is the summing up of the edict written at the end:

Likewise in what pertains to those who have received from the censors the contract for the trumpeter who gives the summons to the centuriate assembly, they shall see to it that on that day, on which the assembly shall take place, the trumpeter shall sound the trumpet on the Citadel and around the walls, and shall sound it before the house-entrance of this accursed Titus Quintius Trogus, and that he be present in the Campus Martius at daybreak.

93. That between the sending around the walls and the calling of the gathering some time elapses, is clear from those things the doing of which in the meantime is written down as the *inlicium* 'invitation'; but the people is called to appear in the assembly because for any other reason this magistrate cannot call together the citizen-army of the City. The censor, the consul, the dictator, the interrex can, because the censor arranges in centuries the citizen-army for a period of five years, when he must ceremonially purify it and lead it to the city under its standards; the dictator and the consul do so every year, because the latter can order the citizen-army where it is to go, a thing which they are accustomed to order on account of the centuriate assembly.

94. Therefore there is no doubt that this is the *inlicium*, when they go around the walls that the people may *inlici* 'be enticed' before the eyes of the magistrate who has the authority to call the men into that place from which the voice of the one who is calling them to the gathering can be heard. Therefore there come from the same source also *illici* 'to be enticed' and *inlicis* 'thou enticest,' which are in the Chorus of Proserpina, and *pellexit*

‘lured,’ which is in the *Hermiona*, when *Pacuvius* says:

Desire for another’s kingdom lured him on.

So also the altar of *Jupiter Elicius* ‘the Elicited’ on the *Aventine*, from *elicere* ‘to lure forth.’

95. This is now done otherwise than it was of old, because the *augur* is present with the *consul* when the citizen-army is summoned, and says in advance the formulas which he is to say. The *consul* regularly gives order to the *augur*, not to the assistant nor to the herald, that he shall call the *inlicium* ‘invitation.’ I believe that this was begun on an occasion when the assistant was not present; it really made no difference to whom he gave the order, and it was for form’s sake only that certain things were done, but they were not always said or done in just the same way. This very word *inlicium* I have found written in the *Commentaries* of *Marcus Junius*; that however *inlex* in *Plautus’s Versa* is a person who does not obey the *lex* ‘law,’ and in the same work *illex* is also that which *illicit* ‘entices,’ is the result of the fact that I has much in common with E and C with G.

96. But since in this connexion I have spoken at length on a few matters, I shall speak briefly on a number of topics, and especially on the Latin words whose origin they think to be in the Greek tongue: as *scalpere* ‘to engrave’ from *σκαλεύειν* ‘to scratch,’ *sternere* ‘to spread out’ from *σπρωννύειν*, *lingere* ‘to lick up’ from *λιγμᾶσθαι*, *i* ‘go thou’ from *ἴθι*, *ite* ‘go ye’ from *ἴτε*, *gignitur* ‘he is born’ from *γίγνεται*, *ferre* ‘bear ye’ from *φέρειτε*, *providere* ‘to act with foresight’ from *προιδεῖν* ‘to see ahead, foresee,’ *errare* ‘to stray’ from *ἔρρειν* ‘to go away’; *strangu-lare* ‘to strangle’ from the word *σταραγγαλᾶν*, *tinguere* ‘to dip, dye’ from *τέγγειν*. Besides, there is *depsere* ‘to knead’ from *δευῆσαι*; from the word which they call *μαλάσσειν*, we say *malaxare* ‘to soften,’ as *gargarissare* ‘to gargle’ from *ἀναγαργαρίζεσθαι*, *putere* ‘to stink’ from *πύθεσθαι* ‘to decay,’ *domare* ‘to subdue’ from *δαμάζειν*, *mulgere* ‘to milk’ from *ἀμέλγειν*, *pectere* ‘to comb’ from *πέκειν*, *stringere* ‘to scrape’ from *στλεγγίζειν*: for this is from *σταλεγγίς* ‘scraper,’ as *runcinare* ‘to plane’ from *runcina* ‘plane,’ of which *ρύκάνη* is the Greek source.

97. As to what concerns the sources of the words which belong to this book, sufficiently numerous examples of this kind have, I think, been set down; I shall stop, and since I have undertaken to send you three books on these topics, two about prose composition and one about poetical, and I have sent you the two about prose, the former about places and the things that are in them, the latter about time-ideas and those things which are associated with them, I shall at last, in the next book, begin to write of the sources of words used in poetry.

BOOK VII

1. The words of the poets are hard to expound. For often some meaning that was fixed in olden times has been buried by a sudden catastrophe, or in a word whose proper make-up of letters is hidden after some elements have been taken away from it, the intent of him who applied the word becomes in this fashion quite obscure. There should be no rebuking then of those who in examining a word add a letter or take one away, that what underlies this expression may be more easily perceived: just as, for instance, that the eyes may more easily see *Myrmecides*' indistinct handiwork in ivory, men put black hairs behind the objects.

2. Even though you employ these tools to unearth the intent of him who applied the word, much remains hidden. But if the art of poesy, which has in the verses preserved many words that are early, had in the same fashion also set down why and how they came to be, the poems would bear fruit in more prolific measure; unfortunately, in poems as in prose, not all the words can be assigned to their primitive radicals, and there are many which cannot be so assigned by him whom learning does not attend with favour in his nocturnal studies, though he read prodigiously. In the interpretation of the Hymns of the Salians, which was made by Aelius, an outstanding scholar in Latin literature, you will see that the interpretation is greatly furthered by attention to a single poor letter, and that much is obscured if such a letter is passed by.

3. Nor is this astonishing: for not only were there many who failed to recognize Epimenides when he awoke from sleep after fifty years, but even Teucer's own family, in the play of Livius Andronicus, do not know who he is after his absence of fifteen years. But what has this to do with the age of poetic words? If the reign of Numa Pompilius is the source of those in the Hymns of the Salians and those words were not received from earlier hymn-makers, they are none the less seven hundred years old. Therefore why should you find fault with the diligence of a writer who has not been able to find the name of the great-grandfather or the grandfather of a demigod's great-grandfather, when you yourself cannot name the mother of your own great-grandfather's great-grandfather? This interval is much closer to us, than the stretch from the present time to the beginning of the Salians, when, they say, the first poetic words of the Romans were composed, in Latin.

4. Therefore the man who has made many apt pronouncements on the origins of words, one should regard with favour, rather than find fault with him who has been unable to make any contribution; especially since the etymologic art says that it is not of all words that the basis can be stated — just as it cannot be stated how and why a medicine is effective for curing; and that if I have no knowledge of the roots of a tree, still I am not prevented from saying that a pear is from a branch, the branch is from a tree, and the tree from roots which I do not see. For this reason, he who shows that *equitatus* 'cavalry' is from *equites* 'cavalrymen,' *equites* from *eques* 'cavalryman,'

eques from equus 'horse,' even though he does not give the source of the word equus, still gives several lessons and satisfies an appreciative person; whether or not we can do as much, the present book itself shall serve as testifying witness.

5. In this book I shall speak of the words which have been put down by the poets, first those about places, then those which are in places, third those about times, then those which are associated with time-ideas; but in such a way that to them I shall add those which are associated with these, and that if any word lies outside this fourfold division, I shall still include it in the account.

6. I shall begin from this:

One there shall be, whom thou shalt raise up to sky's azure temples.

Templum 'temple' is used in three ways, of nature, of taking the auspices, from likeness: of nature, in the sky; of taking the auspices, on the earth; from likeness, under the earth. In the sky, templum is used as in the Hecuba:

great temples of the gods, united with the shining stars.

On the earth, as in the Periboea:

To Bacchus' temples aloft On sharp jagged rocks it draws near.

Under the earth, as in the Andromacha:

Be greeted, great temples of Orcus, By Acheron's waters, in Hades.

7. Whatever place the eyes had intuiti 'gazed on,' was originally called a templum 'temple,' from tueri 'to gaze'; therefore the sky, where we attuimur 'gaze at' it, got the name templum, as in this:

Trembled the mighty temple of Jove who thunders in heaven, that is, as Naevius says, Where land's semicircle lies, Fenced by the azure vault.

Of this temple the four quarters are named thus: the left quarter, to the east; the right quarter, to the west; the front quarter, to the south; the back quarter, to the north.

8. On the earth, templum is the name given to a place set aside and limited by certain formulaic words for the purpose of augury or the taking of the auspices. The words of the ceremony are not the same everywhere; on the Citadel, they are as follows:

Temples and wild lands be mine in this manner, up to where I have named them with my tongue in proper fashion.

Of whatever kind that truthful tree is, which I consider that I have mentioned, temple and wild land be mine to that point on the left.

Of whatever kind that truthful tree is, which I consider that I have mentioned, temple and wild land be mine to that point on the right.

Between these points, temples and wild lands be mine for direction, for viewing, and for interpreting, and just as I have felt assured that I have mentioned them in proper fashion.

9. In making this temple, it is evident that the trees are set as boundaries, and that within them the regions are set where the eyes are to view, that is we tueamur 'are to gaze,' from which was said templum and contemplare 'to

contemplate,' as in Ennius, in the *Medea*:

Contemplate and view Ceres' temple on the left.

Contempla 'do thou contemplate' and conspiciare 'do thou view' are the same, it is obvious, and therefore the augur, when he makes a temple, says conspiciōe 'for viewing,' with regard to where he is to delimit the conspectus 'view' of the eyes. As to their adding cortumio when they say conspicio, this term is derived from the vision of the cor 'heart'; for cor is the basis of cortumio.

10. As to his adding that the temples shall be tesca 'wild lands,' those who have written glossaries say that this means that the temples are inviolable. This is quite wrong: for the Hostilian Meeting-House is a temple and is not inviolable. But that people should have the idea that a temple is a consecrated building, seems to have come about from the fact that in the city Rome most consecrated buildings are temples, and they are likewise inviolable, and that certain places in the country, which are the property of some god, are called tesca.

11. For there is the following in Accius, in the *Philoctetes of Lemnos*:

What man are thou, who dost advance To places desert, places waste?

What sort of places these are, he indicates when he says:

Around you you have the Lemnian shores, Apart from the world, and the high-seated shrines Of Cabirian Gods, and the mysteries which Of old were expressed with sacrifice pure.

Then:

You see now the temples of Vulcan, close by Those very same hills, upon which he is said To have fallen when thrown from the sky's lofty sill.

And:

The wood here you see with the smoke gushing forth, Whence the fire — so they say — was secretly brought To mankind.

Therefore he made no mistake in calling these lands tesca, and yet he did not do so because they were consecrated; but because men attuentur 'gaze at' places where mysteries take place, they were called tuesca.

12. Tueri has two meanings, one of 'seeing' as I have said, whence that verse of Ennius:

I really see thee, sire? Oh Jupiter! And:

Who will now wish, though father or kinsman, to look on your faces?

The other meaning is of 'caring for' and tutela 'guardianship,' as when we say "I wish he were willing tueri 'to care for' the farmhouse," from which some indeed say that the man who attends to consecrated buildings is an aedituus and not an aeditumus; but still this other form itself proceeded from the same source, because when we want some one to take care of the house we say "You will see to matters at home," as Plautus does when he says:

Inside prepare, take pains, see to't; Let that be done, that's needed.

In this way the vestispica 'wardrobe maid' was named, who was spicere 'to see' the vestis 'clothing,' that is, was to see to the clothing and tueri 'guard' it.

Therefore, both temples and tesca 'wastes' were named from tueri, with that difference of meaning which I have mentioned.

13. Moreover, from the same source comes the word in Ennius:

Extemplo take me, kill me, kill my daughter too.

For extemplo 'on the spot' is continuo 'without interval,' because every templum ought to be fenced in uninterruptedly and have not more than one entrance.

14. As for what is in Accius, With thy team do thou go through the sky, through the bright Constellations aloft, which the universe holds, Adorned with its twice six continuous signs, the word polus 'sky' is Greek, it means the circle of the sky: therefore the expression pervade polum 'traverse the sky' means 'go around the πόλος.' Signa 'signs of the zodiac' means the same as sidera 'constellations.' Signa are so called because they significant 'indicate' something, as the Balance marks the equinox; those are sidera which so to speak insidunt 'settle down' and thus indicate something on earth by burning or otherwise: as for example a signum candens 'scorching sign,' in the matter of the flocks.

15. In the phrase Again of the land I shall see the anfracta, anfractum means 'bent or curved,' being formed from a double source, from ambitus 'circuit' and frangere 'to break.' Concerning this the laws bid that a road shall be eight feet wide where it is straight, and sixteen at an anfractum, that is, at a curve.

16. Ennius says:

As surely as to thee Titan's daughter Trivia shall grant a line of sons.

The Trivian Titaness is Diana, called Trivia from the fact that her image is set up quite generally in Greek towns where three roads meet, or else because she is said to be the Moon, which moves in the sky by tres viae 'three ways,' upwards, sidewise, and onwards. She is called Titanis 'daughter of Titan,' because her mother was, as Plautus says, Lato; and she, as Manilius writes, Was begot by the Titan Coeus.

As the same author writes, The chaste Latona shall give birth, by Jove's embrace, To Deliad twins, that is, to Apollo and Diana. These gods were called Deliads because the Titaness gave birth to them on the island of Delos.

17. The same has this:

holy Apollo, who dost hold The true established umbilicus of the lands.

The umbilicus, they say, was so called from our umbilicus 'navel,' because this is the middle place of the lands, as the navel in us. But both these are false statements: this place is not the middle of the lands, nor is the navel the middle point of a man. But in this fashion is indicated the so-called 'counter-earth of Pythagoras,' so that the line which is midway in sky and earth should be drawn below the navel through that by which the distinction is made whether a human being is male or female, where human life starts — and the like is true in the case of the universe: for there all things originate in the centre, because the earth is the centre of the universe. Besides, if the ball of

the earth has any centre, or umbilicus, it is not Delphi that is the centre; and the centre of the earth at Delphi — not really the centre, but so called — is something in a temple building at one side, something that looks like a treasure-house, which the Greeks call the ὀμφαλός, which they say is the tomb of the Python. From this our interpreters turned the word into umbilicus 'navel.'

18. Pacuvius has this verse:

Calydonian terra, nurse of mighty men.

But just as Tusculum has an ager 'field-land,' so Calydon has an ager and not a terra 'land'; but by the privilege of the poets, because Aetolia in which Calydon is located is a terra, he wished all Aetolia to be understood from the name of the part.

19. In this of Accius, Sailing past the mystic waters on the right, mystica 'mystic' is from the famous mysteria 'mysteries,' which are performed there in places close at hand. In the verse of Ennius, Since the Areopagites have cast an equal vote, Areopagitae 'Areopagites' is from Areopagus; this is a place at Athens.

20. Muses, ye who with dancing feet beat mighty Olympus.

Olympus is the name which the Greeks give to the sky, and all peoples give to a mountain in Macedonia; it is from the latter, I am inclined to think, that the Muses are spoken of as the Olympiads: for they are called in the same way from other places on earth the Libethrids, the Pipleids, the Thespiads, the Heliconids.

21. In this phrase of Cassius, The Hellespont and its barriers, claustra 'barriers' is used because once on a time Xerxes clausit 'closed' the place by barriers: for, as Ennius says, He, and none other, on Hellespont deep did fasten a bridgeway.

Unless it is said rather from the fact that at this place the sea concluditur 'is hemmed in' by Asia and Europe; in the narrows it forms the entrance to the Propontis.

22. In the verse of Pacuvius, To be forsaken in the Aegean strait, fretum 'strait' is named from the likeness to fervens 'boiling' water, because the tide often dashes into a strait and boils up. The Aegean is named from the islands, because in this sea the craggy islands in the open water are called aeges 'goats,' from their likeness to she-goats.

23. They had almost arrived; on the aequor deep the rates were gliding. Aequor 'level water' is a name given to the sea, because it is aequatum 'levelled' when it is not stirred up by the wind. By ratis 'raft' he meant a war-ship, as does Naevius when he says:

That they may clash 'gainst the foe Their bronze-shod raft, in which They go o'er the liquid sea, Sweating as they sit.

A war-ship is called a ratis from the oars, because these, when they are raised through the water on the right and on the left, seem to form two rafts; for it is a ratis — from which this word is transferred — there where several

poles or beams are joined together and floated on the water. From this, the adjective *ratarius* is applied to small boats with oars. Here one Leaf is Lacking in the Model Copy 24. ... it is clear that *agrestes* ‘rural’ sacrificial victims were so called from *ager* ‘field-land’; that *infulatae* ‘filleted’ victims were so called, because the head-adornments of wool which are put on them, are *infulae* ‘fillets’: therefore then, with reference to the carrying of leafy branches and flowers to the burial-place, he added:

Decked not with wool, but with a hair-like shock of leaves.

25. The horned shadow lures the bull to fight. It is clear that *cornuta* ‘horned’ is said from *cornua* ‘horns’; *cornua* is said from *curvor* ‘curvature,’ because most horns are *curva* ‘curved.’

26. Learn that we, the *Camenae*, are those whom they tell of as *Muses*. *Casmenae* is the early form of the name, when it originated, and it is so written in other places: the name *Carmenae* is derived from the same origin. In many words, at the point where the ancients said S, the later pronunciation is R, as the following in the Hymn of the *Salians*: Planter God, arise. Everything indeed have I committed unto (thee as) the Opener. Now art thou the Doorkeeper, thou art the Good Creator, the Good God of Beginnings. Thou’lt come especially, thou the superior of these kings...

Here A Space of Ten Lines Was Left Vacant in the Model Copy 27.... <In the Hymn of the *Salians* are found such old forms as> *foedesum* for *foederum* ‘of treaties,’ *plusima* for *plurima* ‘most,’ *meliosem* for *meliosem* ‘better,’ *asenam* for *arenam* ‘sand,’ *ianitos* for *ianitor* ‘doorkeeper.’ Therefore from *Casmena* came *Carmena*, and from *Carmena*, with loss of the R, came *Camena*. From the same radical came *canite* ‘sing ye,’ for which in a *Salian* verse is written *cante*, and this is the verse:

Sing ye to the Father of the Gods, entreat the God of Gods.

28. In The Song of Priam there is the following:

I wish the ancient *Muses* to tell a story old. First, *cascum* means ‘old’; secondly, it has its origin from the Sabine language, which ran its roots back into *Oscan*. That *cascum* is ‘old,’ is indicated by the phrase of *Ennius*:

Land that the Early Latins then held, the long-ago peoples.

It is even better shown in *Manilius*’s utterance:

That Whitehead married Oldie is surely no surprise: The marriage, when he made it, was aged and decayed.

It is shown likewise in the epigram of *Papinius*, which he made with reference to the youth *Casca*:

Funny it is, when your mistress tenderly calls you her “*Casca*”; Daughter of Rummy she, old and a half — you a boy. Call her your “laddie”; for thus there will be the mule’s trade of favours: You’re but a lad, to be sure; Oldie’s the name for your girl.

29. The same is shown by the fact that there is a town named *Casinum*, which was inhabited by the *Samnites*, who originated from the *Sabines*, and we Romans even now call it Old Market. Likewise in several *Atellan farces*

the word denotes Pappus, an old man's character, because the Oscans call an old man casnar.

30. In Lucilius:

Why should I try to tell to you Roundway's round about speeches?

The word ambages 'circumlocutions' comes from the word ambe 'round about,' which is present in ambitus 'circuit' and in ambitiosus 'going around (for votes), ambitious.'

31. In Valerius of Sora is the following:

It is an old adagio, Publius Scipio.

This word has gone out of use to such a point that the Greek word put for it is more easily understood: for it is the same as that which the Greeks call παροιμία 'proverb,' as for example:

I'm holding a wolf by the ears, Dog doesn't eat dog-flesh.

Now adagio is only ambagio with a letter changed, which is said because it ambit 'goes around' the discourse and does not stop at some one thing only. Ambagio resembles ambustum, which is 'burnt around,' and an ambegna cow in the augural speech, which is a cow around which other victims are arranged.

32. Whereas there are three things combined which must be observed in the origin of words, namely from what the word is applied, and to what, and what it is, often there is doubt about the third no less than about the first, as in this case, whether the word for dog in the feminine was at first canis or canes: for in the older writers the expression is one canes. Therefore Ennius writes the following, using canes:

Barks just as loud as a pregnant bitch: but she's toothless.

Lucilius also uses canes:

Worthless man and huge, like the monstrous dog of the butchers.

When applied to one, the word should have been canis, and when applied to several it should have been canes; but Ennius ought not to be blamed for following the earlier custom, nor should he who now says:

Canis 'dog' doesn't eat dog-flesh.

But because dogs by their barking give the signal, as it were, canunt 'sound' the signals, they are called canes; and because by this noise they make known the things which latent 'are hidden' in the night, their barking is called latratus.

33. As some have said canes in the singular, so others have said trabses 'beam, ship' in the singular:

The beakèd trabses is driven by oars through the waters.

Ennius used trabses in the following:

I would the trabses of the fir-tree ne'er had fall'n To earth, in Pelion's forest, by the axes cut!

But now the nominative singular of this word has lost a vowel and become trabs.

34. In the Medus:

Long awaited, Camilla of the gods, thou comest; guest, all hail!

A Camilla, according to those who have interpreted difficult words, is a handmaid assistant; one ought to add, in matters of a more secret nature: therefore at a marriage he is called a camillus who carries the box the contents of which are unknown to most of the uninitiated persons who perform the service. From this, the name Casmilus is given, in the Samothracian mysteries, to a certain divine personage who attends upon the Great Gods. The word, I think, is Greek, because I have found it in the poems of Callimachus.

35. In Ennius there is the verse:

Once a subulo was standing by the stretches of the sea.

Subulo is said, because that is the name which the Etruscans give to pipers; therefore the roots of the word are to be sought in Etruria, not in Latium.

36. With those verses which once the Fauns used to sing, and the poets. Fauni 'Fauns' are divinities of the Latins, of both sexes, so that there are both Faunus and Fauna; the story has come down that they, in the so-called Saturnian verses, were accustomed in well-wooded spots fori 'to speak' those events that were to come, from which speaking they were called Fauni. As for vates 'poets,' the old writers used to give this name to poets from viere 'to plait' verses, as I shall show when I write about poems.

37. Born of a Tartarine body, the warrior maiden Paluda. Tartarinum 'Tartarine' is derived from Tartarus. Plato in his Fourth Dialogue, speaking of the rivers which are in the world of the dead, gives Tartarus as the name of one of them; therefore the origin of Tartarus is Greek. Paluda is from paludamenta, which are distinguishing garments and adornments in the army; therefore when the general goes forth to war and the lictors have changed their garb and have sounded the signals, he is said to set forth paludatus 'wearing the paludamentum.' The reason why these garments are called paludamenta is that those who wear them are on account of them conspicuous and are made palam 'plainly' visible.

38. Plautus has this:

Epeus the maker of smoke, who for our army gets The well-cooked food.

Epeus fumificus 'the smoke-maker' was a cook, named from that Epeus who is said to have made the Trojan Horse at Troy and to have looked after the food of the Greeks.

39. In Naeuius is the verse:

And sooner will a lobster give birth to a Luca bos.

Luca bos is an elephant; why it is thus called, I have found set forth by the authors in two ways. For in the Commentary of Cornelius was the statement that Lucas is from Libyci 'the Libyans,' and in that of Vergilius, that Lucas was from Lucani 'the Lueanians': from the fact that our compatriots used to call the largest quadruped that they themselves had, a bos 'cow'; and so, when among the Lucanians, in the war with Pyrrhus, they first saw elephants in the ranks of the enemy — that is, horned quadrupeds like wise (for what many

call teeth are really horns), they called the animal a Luca bos, because they thought it a Lucana bos 'Lucanian cow.'

40. If the Lucae boves were really named from Libya, quite probably panthers also and lions would be called not African beasts, but Lucae 'Lucan'; and bears are no more Lucanian than Lucan, though they are called Lucanian. Therefore I rather think that Lucas is from lux 'light,' because the elephants glistened afar on account of the gilded royal shields, with which their towers at that time were adorned.

41. In Ennius there is this:

Back without peace comes th' orator, hands back to his ruler the business.

Orator 'spokesman' is said from oratio 'speech'; for he who was to present a verbal plea before the one to whom he was sent as envoy, was called an orator, from oratio. When the business was of greater import, year thrown into the Tiber from the Bridge-on-Piles, by the priests, acting on behalf of the state. These are called tutulati 'provided with tutuli,' since they at the sacrifices are accustomed to have on their heads something like a conical marker; this is called a tutulus from the fact that the twisted locks of hair which the matrons wear on the tops of their heads wrapped with a woollen band, used to be called tutuli, whether named from the fact that this was done for the purpose of tueri 'protecting' the hair, or because that which is highest in the city, namely the Citadel, was called tutissimum 'safest.'

45. He says that this same Pompilius created the flamens or special priests, every one of whom gets a distinguishing name from one special god: in certain cases the sources are clear, for example, why one is called Martial and another Quirinal; but there are others who have titles of quite hidden origin, as most of those in these verses:

The Volturnal, Palatual, the Furinal, and Floral, Falacrine and Pomonal this ruler likewise created; and these are obscure. Their origins are Volturnus, the divine Palatua, Furrina, Flora, Father Falacer, Pomona.

46. In Ennius is this verse:

Now the beasts were about to give cry, their shrill-toned signals.

In this, cata 'shrill-toned' is acuta 'sharp or pointed,' for the Sabines use the word in this meaning; therefore Keen Aelius Sextus does not mean 'sage,' as they say, but 'sharp'; and in the verse Then he began to say at the same time words that weredata, the cata words must be understood as sharp or pointed.

47. In Lucilius are the following:

What then? A tunny caught, they throw the goby out.

And Sauces of salted perch and of catfish are killing you, Lupus.

And That you take a... and a bonito.

These words are names of fishes; they originated in Greece.

48. In Ennius we find:

What the hollow caldron takes back in its skybluish belly.

Cava cortina 'hollow caldron' is thus said because that which is between

earth and sky is somewhat in the shape of Apollo's tripod-caldron; cortina is derived from cor 'heart,' because it is from this caldron that the first fortune-telling lots are believed to have been taken.

49. In Ennius we find:

Nay even, they carried them off from there despite the foes. The enemy are called perduelles 'foes'; as perfecit 'accomplished' is formed from per 'through, thoroughly' and fecit 'did,' so perduellis is formed from per and duellum 'war': this word afterward became bellum. From the same reason, Duellona Goddess of War' became Bellona.

50. In Plautus is this:

Not the Collar-Bone nor Evening-Star nor Pleiads now do set.

Iugula 'Collar-Bone' is a constellation, which Accius calls Orion when he says:

More quickly now Orion comes to sight.

The head of this constellation is said to consist of three stars, below which are two bright stars which they call the Shoulders; the space between them is the neck, as it were, and is called the Iugula 'Collar-Bone. Vesperugo 'Evening-Star' is the star which rises vespere 'in the evening,' from which Opillus writes its name as Vesper: therefore the word is said in a second meaning:

Vesper is here, he whom the Greeks call the Evening-time Deity.

51. Naevius has the following:

She addresses her own father, the best and the supreme. Supremum is derived from superrimum, superlative of superum 'higher': therefore the Twelve Tables say:

Let the last (suprema) time of day be at sunset.

The Books of the Augurs call the last time for augury a tempestus and not a tempestas.

52. In The Story of the Helmet-Horn is the verse:

Who for ten years fought for wages (latrocinatus) for the King Demetrius.

Those were called latrones 'mercenaries' from latus 'side,' who were at the King's side and had a sword at their own side (afterwards they called them stipatores 'body-guards' from stipatio 'close attendance') and were hired for pay: for this pay is in Greek called λάτρον. From this, the old poets sometimes call regular soldiers latrones. But now the name latrones is given to the highwaymen who block the roads, because like regular soldiers they have swords, or else because they latent 'lie in hiding' to ambush their victims.

53. In Naevius:

I laughed inside to see a drunk go tottering.

Cassabundum 'tottering,' from cadere 'to fall.' The same author has this:

Slippers on his feet he wore, he was wrapped about with a saffron robe.

Both words (diabathra 'slippers' and epicrocum 'saffron robe') are Greek.

54. In The Menaechmi:

Why, you'd bid me sit among the maids at work and card the wool.

This same word *carere* ‘to card’ is in the *Cemetria* of Naevius. *Cārēre* is from *cārēre* ‘to lack,’ because then they cleanse the wool and spin it into thread, that it may *carere* ‘be free’ from dirt: from which the wool is said *carminari* ‘to be carded’ then when they *carunt* ‘card’ out of it that which sticks in it and is not wool, those things which in the *Romulus* Naevius calls *asta*, from the Oscans.

55. In *The Persian*:

Now sure he’ll be here at once, I think, my jolly chum.

Congerro ‘chum,’ from *gera* ‘wickerwork’; this is a Greek word, the Latin equivalent of which is *cratis* 56. In *The Menaechmi*:

The others enrolled as extras in the army are treated just that way.

Ascriptivi ‘enrolled as extras’ were so called because in the past men who did not receive arms *ascribebantur* ‘used to be enrolled as extras,’ to take the place of the regularly armed soldiers if any of them should be killed.

57. In *The Three Shillings*:

For I clearly see In him a *ferentarius* friend has been found for you.

Ferentarius, from *ferre* ‘to bring’ that which is not empty and profitless; or because those were called *ferentarii* cavalymen who had only weapons which *ferrentur* ‘were to be thrown,’ such as a javelin. Cavalymen of this kind I have seen in a painting in the old temple of *Aesculapius*, with the label “*ferentarii*.”

58. In *The Story of the Trifles*:

Where are you, *rorarii*? Behold, they’re here. Where are the *accensi*? See, they’re here.

Rorarii ‘skirmishers’ were those who started the battle, named from the *ros* ‘dew-drops,’ because it *rorat* ‘sprinkles’ before it really rains. The *accensi*, *Cato* writes, were attendants; the word may be from *censio* ‘opinion,’ that is, from *arbitrium* ‘decision,’ for the *accensus* is present to do the *arbitrium* of him whose attendant he is.

59. *Pacuvius* says:

When the gods’ portents triply strong...

60. In *The Trader*:

That’s no more a *dividia* to you than ’twas to me to-day.

(This word was used by Naevius in *The Story of the Garland*, in the same meaning.) *Dividia* ‘vexation’ is said from *dividere* ‘to divide,’ because the *distractio* ‘pulling asunder’ caused by pain is a division; therefore the same author says in the *Curculio*:

But what’s the matter? — Stitch in the side, an aching back, And my lungs are torn asunder.

61. In the *Pagon*:

Respect for hash is gone, for haunch of ham, for chops.

Syncerastum ‘hash’ is all kinds of food mixed together, under an old Greek name.

62. In *The Lazy Hanger-on*:

I started to go home by a side-way to the right.

Trames 'side-way' is said from transversum 'turned across.'

63. In The Runaways:

Then come and look, and see what welts. — I've looked now; well, what next?

Vibices 'welts,' the flesh of the body raised high by lashes.

64. In The Story of the Trinket-Box:

As if they aren't here now, the dark and dirty slugs.

Limax 'slug' from limits 'slimy mud,' because it lives there.

Diobolous women, rush-perfumed, quite wonder-foul. Diobolares 'diobolous,' from two obols apiece. Schoenicolae 'rush-perfumed,' from schoenus 'aromatic rush,' an unpleasant perfumed ointment. Miraculae 'wonder-foul,' from mira 'wonderful things,' that is, monstrosities; from which Accius says:

Plautus, Frag. 108 Ritschl. Misshapen masks with twisted features, ugly wonders (miriones).

65. In the same writer:

Just withered women, limping, tottering, worthless quite.

Scratiae 'withered women,' from excreare 'to cough and spit,' indicates those that are siccae 'dried up.' Scrupipeda 'limping,' Aurelius writes, is from scauripeda 'having swollen ankles'; Juventius the writer of comedies said that it was from a hairy caterpillar which is found on foliage and has many pedes 'feet'; Valerius derived it from pes 'foot' and scrupea 'difficulty.' From this Accius has set it down in an interesting way: thus there is in the Melanippus the verse:

You throw your scruples off? A difficulty you'd take upon your back.

Strittabillae is from strettillare, itself from strittare, said of a person who with difficulty keeps on his feet.

66. In The Riding-Saddle:

Wives united make their husbands' harvest dear instead of cheap.

So in The Bucket-Cleaner the same writer says:

My darling wife a woman is: As I have learned, I know how unionist she is. Claudius writes that women who make joint entreaties are clearly shown to be axitiosae 'united, unionist.' Axitiosae is from agere 'to act': as factiosae 'partisan women' are named from facere 'doing' something in unison, so axitiosae are named from agere 'acting' together, as though actiosae.

67. In the Cesistio:

For the gods the thigh-meats or the lewd parts from the loins.

Stribula 'thigh-meats,' as Opillus writes, are the fleshy parts of cattle around the hips; the word is Greek, derived from the fact that in this place there is a socket-joint.

68. In The Story of the Prison Ropes:

At once I with my rasp did scrape the old fellow clean.

Scobina 'rasp,' from scobis 'sawdust'; for a file belongs to a carpenter's

equipment.

69. In The Little Man from Carthage:

You'd outdo the stag in running or the stilt-walker in stride.

Grallator 'stilt-walker' is said from his great gradus 'stride.'

70. In The Rough Customer:

Although without a deed of bravery I may have A clear-toned citizen as leader of my praise.

Praefica 'praise-leader,' as Aurelius writes, is a name applied to a woman from the grove of Libitina, who was to be hired to sing the praises of a dead man in front of his house. That this was regularly done, is stated by Aristotle in his book entitled Customs of Foreign Nations; whereto there is the testimony which is in The Strait of Naevius:

Dear me, I think, the woman's a praefica: it's a dead man she is praising.

Claudius writes:

A woman who praeficeretur 'was to be put in charge' of the maids as to how they should perform their lamentations, was called a praefica.

Both passages show that the praefica was named from praefectio 'appointment as leader.'

71. In Ennius we find:

Treasures which ten of the Coclites buried, High on the tops of Rhiphaean mountains.

Codes 'one-eyed' was derived from oculus 'eye,' as though ocles, and denoted a person who had only one eye; therefore in the Curculio there is this:

I think that you are from the race of Coclites; For they are one-eyed.

72. Now I shall speak of terms denoting time. In the phrase of Cassius, By dead of night he came unto our home, intempesta nox 'dead of night' is derived from tempestas, and tempestas from tempus 'time': a nox intempesta 'un-timely night' is a time at which no activity goes on.

73. What time of the night doth it seem? — In the shield Of the sky, that soundeth aloft, lo the Pole Of the Wain outstrippeth the stars as on high More and more it driveth its journey of night.

Here the author wishes to indicate that the night is advanced, from the motion of the Temo 'Wagon-Pole'; but the origin of Temo and the reason for its use, are hidden. My opinion is that in old times the farmers first noticed certain signs in the sky which were more conspicuous than the rest, and which were observed as suitable to indicate some profitable use, such as the time for tilling the fields.

74. The marks of this one are, that the Greeks, for example Homer, call these seven stars the Wagon and the sign that is next to it the Ploughman, while our countrymen call these seven stars the Triones 'Plough-Oxen' and the Temo 'Wagon-Pole' and near them the Axis 'axle of the earth, north pole': for indeed oxen are called triones by the ploughmen even now, especially when they are ploughing the land; just as those of them which easily cleave the glebae 'clods of earth' are called Mighty glebarii 'clod-breakers,'

so all that ploughed the land were from terra 'land' called *terriones*, so that from this they were called *triones*, with loss of the E.

75. *Temo* is derived from *tenere* 'to hold': for it *continet* 'holds together' the yoke and the cart, the whole being named from a part, as is true of many things. The name *triones* may perhaps have been given because the seven stars are so placed that the sets of three stars make triangles.

76. I see some light in the sky — can it be dawn? The morning-star is called *iubar*, because it has at the top a diffused light, just as a lion has on his head a *iuba* 'mane.' Its rising indicates that it is about the end of the night. Therefore *Pacuvius* says:

When morning-star appears and night has run her course.

77. *Plautus* has this in *The Lazy Hanger-on*:

From there to here, right drunk, he came, at early dusk.

Crepusculum 'dusk' is a word taken from the *Sabines*, and it is the time when there is doubt whether it belongs to the night or to the day. Therefore in *The Finger-Ring* there is this:

So at dusk, the time when wild beasts make their love, light up your lamps.

Therefore doubtful matters were called *creperae*.

78. In *The Three Shillings*:

General resting time of night'twould be, before you reached its end.

Concubium 'general rest' is said from *concubitus* 'general lying-down' for the purpose of sleeping.

79. In *The Story of the Ass* there is this verse:

I'll see to it, I wish it done; come back at *conticinium*.

I rather think that *conticinium* 'general silence' is from *conticiscere* 'to become silent,' or else, as *Opillus* writes, from that time when men *conticuerunt* 'have become silent.'

80. Now I shall speak of those things which have an added meaning of occurrence at some special time, when they are said or done.

In *Accius*:

The elastic weapon bring into action, bending it With horse-hair string.

Reciproca 'elastic' is a condition which is present when a thing returns to the position from which it has started. *Reciprocare* 'to move to and fro' is made from *recipere* 'to take back,' or else because *procare* was said for *poscere* 'to demand.'

81. In *Plautus*:

How sidewise, as a crab is wont, he moves, Not straight ahead.

Proversus 'straight ahead' is said of a man who is turned toward that which is in front of him; and therefore he who is going out into the vestibule, which is at the front of the house, is said *prodire* 'to go forth' or *procedere* 'to proceed.' But since the brothel-keeper was not doing this, but was going sidewise along the wall, *Plautus* said "How sidewise he moves like a crab, not *proversus* 'turned straight ahead' like a man."

82. In *Ennius*:

Who gave Andromache her name, he gave aright.

Likewise:

Therefore Paris now the shepherds as Alexander do address.

In wishing to imitate Euripides and set down the radical, he fell into an error; for because Euripides wrote in Greek the radicals are obvious. Euripides says that Andromache received her name because she ἀνδρὶ μάχεται 'fights her husband': who can understand that this is what Ennius means in the verse Who gave Andromache her name, he gave aright?

Or that he who had been Paris was in Greece called Alexander from the same source from which Hercules also was termed Alexicacos 'Averter of evils' — namely from the fact that he was a defender of men?

83. In Accius:

And now afar off I see that the dawn Is red.

Aurora 'dawn' is said of the phenomenon before sunrise, from the fact that the air aurescit 'grows golden' from the sun's fire, which at that time is golden. As for his addition of rutilare 'to be red,' that is from the same colour; for rutuli is an expression for golden hair, and from that also women with extremely red hair are called rutilae 'Goldilocks.'

84. In Terence:

He whores, he drinks, he's scented up at my expense.

Scortari 'to whore' is to consort quite frequently with a harlot, who gets her name scortum from pellis 'skin': for not only did the ancients call a skin scortum, but even now we say scortea for things which are made of leather and skins. In some sacrifices and chapels we find the prescription:

Let nothing scorteum 'made of hide' be brought in, with this intent, that nothing dead should be there. In the Atellan farces you may notice that the countrymen say that they have brought home a pellicula rather than a scortum.

85. In Accius:

By invoking your name And your numen with many a prayer.

Numen 'divine will or sway,' they say, is imperium 'power,' and is derived from nutus 'nod,' because he at whose nutus 'nod' everything is, seems to have the greatest imperium 'power'; therefore Homer uses this word in application to Jupiter, and so does Accius a number of times.

86. In Plautus:

There's one thing I except: The olive-salad there is eaten just like mad.

Epityrum 'olive-salad' is the name of a food which was commoner in Sicily than in Italy. When he wanted to say that this was eaten impetuously, he said insane 'crazily,' because the crazy do everything impetuously.

87. In Pacuvius:

Deeply affected, as though frenzied by the Nymphs Or stirred by Bacchus' ceremonies.

Lymphata 'frenzied by the Nymphs' is said from lymphā 'water, water-goddess,' and lymphā is from Nymphā 'water-nymph,' as for example Thetis among the Greeks, mentioned by Ennius:

Thelis was his mother.

Persons of disturbed (commota) mind, whom in Greece they call νυμφόληπτοι ‘seized by the Nymphs,’ our fellow-countrymen from this called lymphati. Bacchi ‘of Bacchus,’ who is called also Liber; his followers were called Bacchae ‘Bacchantes,’ from Bacchus; and wine was in Spain called bacca.

88. All these are of Greek origin, as is also that which is in the verse of Pacuvius:

I roam, in halcyon fashion b frequenting the shore.

For this bird is now called in Greek the halcyon, and by our fellow-countrymen the alcedo ‘kingfisher’; because it is said to hatch its young in winter, at a time when the sea is calm, they call these days the Halcyonia ‘Halcyon Days. As for the expression alcyonis ritu ‘in halcyon fashion’ in the verse, this means “according to the habit of that bird,” as when the seer directs the making of each sacrifice in its own ritus ‘fashion,’ and we say that the Board of Fifteen conduct the ceremonies in the Greek ritus ‘fashion,’ not in the Roman fashion. For what is done rite ‘duly,’ that is ratum ‘valid’ and rectum ‘right.’; from this, Accius wishes When the ceremonies have been rite ‘duly’ performed to be understood as recte ‘rightly’ performed.

89. In Ennius:

If you’ll give me your attention, ’twill be courteously explained.

Comiter ‘courteously’ means cheerfully and willingly; it is derived from the Greek word κῶμος ‘merry-making,’ from which come the Latin comissatio ‘revel’ and in Greek, as certain authorities write, κωμωδία ‘comedy.’

90. In Atilius:

Take it, Lydus, cut it, fix it, season it.

Cape ‘take,’ the same word from which comes the compound accipe ‘receive’; but this must be taken up again in the next book.

91. In Pacuvius:

There’s no device Which can tame or cure the business or remake it new.

Cicurare ‘to tame’ is the same as mansuefacere ‘to make tame’; for what is distinct from the ferum ‘wild’ is called cicur ‘tame,’ and therefore the saying A cicur nature I possess means a tame or civilized nature; from which the nobles of the Veturian clan had the added name Cicurinus. Cicur seems to be derived from ciccus; ciccus is the name which they gave to the thin membrane which is the division between the sections in, for example, a pomegranate; from which moreover Plautus says:

But that he wants his rations, I don’t care a whit.

92. In Naevius:

I see I’m nigh encircled by unrighteousness.

Ferme ‘nigh’ is said for that which is now fere ‘approximately’; both are derived from ferre ‘to bear,’ because that which fertur ‘is borne’ is in motion and approaches some goal.

93. In Plautus:

‘Ray! by my wordy strife my wife at last I’ve driven from the door. Euax ‘hurray!’ is a word that in itself means nothing, but is a natural ejaculation, like that in Ennius:

Aha, his very shield did fall!

Also in Ennius:

Bravo, my child! That’s happened better than you hoped.

In Pompilius:

Alas! O Fortune, why do you crush me hostilely?

As for iurgio ‘by wordy strife,’ that is litibus ‘by contentions’: therefore men between whom a matter was in dispute, called this a lis ‘suit’; therefore in legal actions we see it said:

Matter or suit to which one must make a plea.

From this, you may see that iurgare ‘to contend in words’ is said from ius ‘right,’ when a person litigaret ‘went to law’ iure ‘with right’; from which he obiurgat ‘rebukes,’ who does this iuste ‘with justice.’

94. In Lucilius:

And if some of the things any stole for themselves from the forum.

He said clepsere ‘stole,’ from the same source whence others say clepere, that is ‘to snatch away’; they come from clam ‘secretly,’ giving clapere and then clepere, with change of A to E, as in many words. But clepere can quite well be said from Greek κλέπτειν ‘to steal.’

95. In Matius:

Grief he felt that the bodies of Greeks were chewed by the fire.

Mandier ‘to be chewed’ is said from mandere ‘to chew,’ whence manducari ‘to chew,’ from which also in the Atellan Farces they call Dossennus ‘Humpback’ by the name Manducus ‘Chewer.’

96. In Matius:

He the interpreter, sponsor of foul and funereal omen.

Obscaenum ‘foul’ is said from scaena ‘stage’; this word Accius writes scena, like the Greeks. In a considerable number of words some set A before the E, and others do not; so what some spell scaeptrum ‘sceptre,’ others spell sceptrum, and some spell the name of Plautus’s play Faeneratrix ‘The Woman Money-lender,’ others Feneratrix. Similarly faenisicia ‘mown hay’ and fenisicia; and the countrymen call the old man’s character Mesius, not Maesius, from which peculiarity Lucilius is able to write:

Cecilius let’s not elect to be countrified pretor. Wherefore anything shameful is called obscaenum, because it ought not to be said openly except on the scaena ‘stage.’

97. Perhaps it is from this that a certain indecent object that is hung on the necks of boys, to prevent harm from coming to them, is called a scaevola, on account of the fact that scaeva is ‘good.’ It is named from scaeva, that is sinistra ‘left,’ because those things which are sinistra ‘on the left side’ are considered to be good auspices; from which it is said that an assembly or

anything else takes place, as I have said, with scaeva avi ‘a bird on the left side,’ which is now called sinistra. The word is from the Greek, because they call the left side σκαυά; wherefore, as I have said, an obscaenum omen is a foul omen: omen itself, because that by which it is spoken is the os ‘mouth,’ is by origin osmen, from which S has been worn away by use.

98. In Plautus:

Since long ago I loved you and decided you’re my friend.

Crevi ‘I decided’ is the same as constitui ‘I established’: therefore when an heir has established that he is the heir, he is said cernere ‘to decide,’ and when he has done this, he is said crevisse ‘to have decided.’

99. In the same author, the word frequentem ‘frequent’ in Frequent aid you gave me means assiduam ‘busily present’: therefore he who is at hand assiduus ‘constantly present’ fere et quoin ‘generally and when’ he ought to be, he is frequens, as the opposite of which infrequens is wont to be used. Therefore that which these same girls say:

Dear me, at that price that you say it is easy For one who desires it to be frequently with us; So nicely and elegantly you received us At luncheon, clearly means: it is easy to get us to be constantly present at your house, since you entertain us so well.

100. In Ennius:

Resolved are they to stand and be dug through their bodies with javelins.

This verb fodare ‘to dig’ which Ennius used, was made from fodere ‘to dig,’ from which comes fossa ‘ditch.’

101. In Ennius:

With words destroy him, crush him if he make a sound. Mussare ‘to make a sound’ is said because the muti ‘mute’ say nothing more than mu; from which the same poet uses this for that which is least:

And, as they say, not even a mu dare they utter.

102. In Pacuvius:

May the gods advise thee of better things to do, and thy madness sweep away!

Averruncare ‘to sweep away’ is from avertere ‘to avert,’ just as the god who presides over such matters is called Averruncus. Therefore men are wont to pray of him that he avert dangers.

103. In The Story of the Money-Jar:

By my cheeping I’ll bring you into disrepute before the house.

This pipulus ‘cheeping’ is convicium ‘reviling,’ derived from the pipatus ‘cheeping’ of chicks. Many terms are transferred from the cries of animals to men, of which some are obvious and others are obscure. Among the clear terms are the following: Ennius’s For it his mind and his heart both are barking.

Plautus’s The odious fellow yelps at all his household, every one.

Caecilius’s To bleat the thing abroad, so that he thought it nought.

Lucilius’s This, I say, he’ll bray from the stand and lament to the public.

The same poet's How much neighing and prancing like horses.

104. Less clear are the following, such as that of Porcius, an expression derived from wolves:

To flutter while howling.

That of Ennius, from calves:

The piper-girl doth bleat with great to-do.

That of the same poet, from oxen:

Bellowing with uproar.

That of the same poet, from lions:

A stop they made of the roaring.

That of the same poet, from young goats:

Shouting rolls to the sky and wails through the ether.

That of Sueius, from blackbirds:

From 'midst the leaves he snaps his bill and sweetly chirps. That of Maccius in the Casina, from finches:

What do you twitter for? What's that you wish so eagerly?

That of Sueius, from birds:

So he'll bring the snappers fairly into court and not To the judgement of Aesopus and the audience.

105. In The Flatterer:

A bound obligation...

Nexum 'bound obligation,' Manilius writes, is everything which is transacted by cash and balance-scale, including rights of ownership: but Mucius defines it as those things which are done by copper ingot and balance-scale in such a way that they rest under formal obligation, except when delivery of property is made under formal taking of possession. That the latter is the truer interpretation, is shown by the very word about which the inquiry is made: for that copper which is placed under obligation according to the balance-scale and does not again become independent (*nec suum*) of this obligation, is from that fact said to be *nexum* 'bound.' A free man who, for money which he owed, *nectebat* 'bound' his labour in slavery until he should pay, is called a *nexus* 'bondslave,' just as a man is called *obaeratus* 'indebted,' from *aes* 'money-debt.' When Gaius Poetelius Libo Visulus was dictator, this method of dealing with debtors was done away with, and all who took oath by the Good Goddess of Plenty were freed from being bondslaves.

106. In the Casina:

Let him go and make love, let him do what he will, As long as at home you have nothing amiss.

Nihil delictum 'nothing amiss' is said from this, that things are not *ad deliquandum* 'in need of straining out' the admixtures, as those which are turbid are strained, that they may become *liquida* 'clear.' Aurelius writes that *delictum* is from *liquidum* 'clear'; Claudius, that it is from *eliquatum* 'strained.' Anyone who prefers to follow either of them will have an authority to back him up.

In Atilius:

With joy his mind is melted.

Liquitur 'is melted' is formed from liquare 'to melt.'

107. I am quite aware that there are many words still remaining in the poets, whose origins could be set forth; as in Naevius, in the Hesione, the tip of a sword is called *lingula*, from *lingua* 'tongue' in the *Clastidium*, *vitulantes* 'singing songs of victory,' from *Vitula* 'Goddess of Joy and Victory'; in The Artifice, *caperrata froute* 'with wrinkled forehead,' from the forehead of a *capra* 'she-goat'; in the *Demetrius persibus* 'very knowing,' from *perite* 'learnedly': therefore under this rare word they write *callide* 'shrewdly'; in the *Lampadio*, *protinam* 'forthwith' from *protinus* (of the same meaning), indicating lack of interruption in time or place; in the *Nagido*, *clucidatus* 'sweetened,' although we have been told by the teachers that it means 'tame'; in the *Romulus*, *consponsus*, meaning a person who has been asked to make a counter-promise; in The Branded Slave *praeibia* 'amulets,' from *praebere* 'providing' that he may be safe, because they are prophylactics to be hung on boys' necks; in The Craftsman, *confictant* 'they unite on a tale,' said from agreeing on a *confictum* 'fabrication.'

108. Also, in The Girl of Tarentum, *praelucidum* 'very brilliant,' from *lux* 'light,' meaning 'shining'; in The Story of the Shirt, They shake the jars that make the lots jump out, *ecbolicas* 'causing to jump out,' because of the lots which are cast out, is said from the Greek word ἐκβολή; and in The Punic War Not even quite *sardare* 'to understand like a Sardinian,' where *sardare* is said from *serare* 'to bolt,' that is, *sardare* means 'to open'; from this also *sera* 'bolt,' on the removal of which the doors are opened.

109. But because I fear that there will be more who will blame me for writing too much of this sort than will accuse me of omitting certain items, I think that this roll must now rather be compressed than hammered out to greater length: no one is blamed who in the cornfield has left the stems for the gleaner. Therefore as I had arranged six books on how Latin names were set upon things for our use: of these I dedicated three to Publius Septumius who was my quaestor, and three to you, of which this is the third — the first three on the doctrine of the origin of words, the second three on the origins of words. Of those which precede, the first roll contains the arguments which are offered as to why Etymology is not a branch of learning and is not useful; the second contains the arguments why it is a branch of learning and is useful; the third states what the nature of etymology is.

110. In the second three which I sent to you, the subjects are likewise divided off: first, that in which the origins of words for places are set forth, and for those things which are wont to be in places; second, with what words times are designated and those things which are done in times; third, the present book, in which words are taken from the poets in the same way as those which I have mentioned in the other two books were taken from prose writings.

Therefore, since I have made three parts of the whole work On the Latin

Language, first how names were set upon things, second how the words are declined in cases, third how they are combined into sentences — as the first part is now finished, I shall make an end to this book, that I may be able to commence the second part.

BOOK VIII

One Book of Arguments which are advanced against the Existence of the Principle of Analogy 1. Speech is naturally divided into three parts, as I have shown in the previous books: its first part is how names were imposed upon things; its second, in what way the derivatives of these names have arrived at their differences; its third, how the words, when united with one another reasonably, express an idea. Having set forth the first part, I shall from here begin upon the second. As every offshoot is secondary by nature, because that vertical trunk from which it comes is primary, and it is therefore declined: so there is declension in words: homo ‘man’ is the vertical, hominis ‘man’s’ is the oblique, because it is declined from the vertical.

2. From the manifold nature of this sort there are these causes of the differences: for what reason, and to what product, and in what way, in speaking, the words are declined. The first two of these I shall pass over briefly, for two reasons: because there will have to be a rehandling of the topics when I write of the stock of words, and because the third of them has numerous and extensive subdivisions of its own.

3. Inflection has been introduced not only into Latin speech, but into the speech of all men, because it is useful and necessary; for if this system had not developed, we could not learn such a great number of words as we have learned — for the possible forms into which they are inflected are numerically unlimited — nor from those which we should have learned would it be clear what relationship existed between them so far as their meanings were concerned. But as it is, we do see, for the reason that that which is the offshoot bears a similarity to the original: when legi ‘I have gathered’ is inflected from lego ‘I gather,’ two things are clear at the same time, namely that in some fashion the acts are said to be the same, and yet that their doing did not take place at the same time. But if, for the sake of a word, one of these two related ideas was called Priamus and the other Hecuba, there would be no indication of the unity of idea which is clear in lego and legi, and in nominative Priamus, dative Priamo.

4. As among men there are certain kinships, some through the males, others through the clan, so there are among words. For as from an Aemilius were sprung the men named Aemilius, and the clan-members of the name, so from the name of Aemilius were inflected the words in the noun-clan: for from that name which was imposed in the nominative case as Aemilius were made Aemilii, Aemilium, Aemilios, Aemiliorum, and in this way also all the other words which are of this same line.

5. The origins of words are therefore two in number, and no more: imposition and inflection; the one is as it were the spring, the other the brook. Men have wished that imposed nouns should be as few as possible, that they might be able to learn them more quickly; but derivative nouns they have wished to be as numerous as possible, that all might the more easily say those

nouns which they needed to use.

6. In connexion with the first class, a historical narrative is necessary, except by outright learning such words do not reach us; for the other class, the second, a grammatical treatment is necessary, and for this there is need of a few brief maxims. For the scheme by which you have learned to inflect in the instance of one noun, you can employ in a countless number of nouns: therefore when new nouns have been brought into common use, the whole people at once utters their declined forms without any hesitation. Moreover, those who have freshly become slaves and on purchase become members of a large household, quickly inflect the names of all their fellow-slaves in the oblique cases, provided only they have heard the nominative.

7. If they sometimes make mistakes, it is not astonishing. Even those who first imposed names upon things perhaps made some slips in some instances: for they are supposed to have desired to designate things individually, that from these inflection might be made to indicate plurality, as *homines* 'men' from *homo* 'man.' They are supposed to have desired that male children be designated in such a way that from these the females might be indicated by inflection, as the feminine *Terentia* from the masculine *Terentius*; and that similarly from the names which they set in the nominative case, there might be other forms to which they could arrive by inflection. But they are supposed to have been unable to hold fast to these principles in everything, because the plural form *scopae* denotes either one or two brooms, and *aquila* 'eagle' denotes both the male and the female, and *vis* 'force' is used for the nominative and for an oblique case of the word.

8. Why such words are not so much at fault as men think, it is in most instances not hard to explain, but it is not necessary to do so at this time; for it is not how they have been able to arrive at the words, but how they wished to express themselves, that is of import for the subject which is before us: inasmuch as genitive *scoparum* can be no less easily derived from the plural *scopae* which they did impose on the object as its name, than if they had given it the name *scopa* in the singular, and made the genitive *scopae* from this — and other words likewise.

9. The reason, I say, why they made these inflected forms from the names which they had set upon things, is that which I have shown; the next point is for me to sketch by classes, but briefly, the forms at which they have wished to arrive by inflection, or have not wished to arrive. For there are two classes of words, one fruitful, which by inflection produces from itself many different forms, as for example *lego* 'I gather,' *legi* 'I have gathered,' *legam* 'I shall gather,' and similarly other words; and a second class which is barren, which produces nothing from itself, as for example *et* 'and,' *iam* 'now,' *vix* 'hardly,' *eras* 'to-morrow,' *magis* 'more,' *cur* 'why.'

10. In those things whose use was simple, the inflection of the name also was simple; just as in a house where there is only one slave there is need of only one slave-name, but in a house where there are many slaves there is need

of many such names. Therefore also in those things which are names, because the differentiations of the word are several, there are more offshoots, and in those things which are connectives and join words, because there was no need for them to be inflected into several forms, the words generally have but one form: for with one and the same thong you can fasten a man or a horse or anything else, whatever it is, which can be fastened to something else. Thus, for example, we say in our talking, "Tullius et 'and' Antonius were consuls": with that same et we can link together any set of two consuls, or — to put it more strongly — any and all names, and even all words, while all the time that one-syllabled prop-word et remains unchanged. Therefore under nature's guidance it has come about that we should not think that there are inflected forms from all these names which have been set upon things.

11. In the word-classes in which inflections may develop, the parts of speech are two, unless, following Dion, we divide into three divisions the ideas which are indicated by words: one division which indicates also case, a second which indicates also time, a third which indicates neither. Of these, Aristotle says that there are two parts of speech; nouns, like homo 'man' and equus 'horse,' and verbs, like legit 'gathers' and currit 'runs.'

12. Of the two kinds, noun and verb, certain words are primary and certain are secondary: primary like homo 'man' and scribit 'writes,' and secondary like doctus 'learned' and docte 'learnedly,' for we say homo doctus 'a learned man' and scribit docte 'writes learnedly.' These ideas are attended by those of place and time, because neither homo nor scribit can be asserted without the presupposition of place and of time — yet in such a way that place is more closely associated with the idea of the noun homo, and time more closely with the act of writing.

13. Since among these the noun is first — for the noun comes ahead of the verb, and the other words stand later relatively to the noun and the verb — the nouns are accordingly first. Therefore I shall speak of the form-variations of nouns before I take up those of verbs.

14. Nouns are varied in form either to show differences in those things of which they are the names, as the woman's name Terentia from the man's name Terentius, or to denote those things outside, of which they are not the names, as equiso 'stable-boy' from equus 'horse.' To show differences in themselves they are varied in form either on account of the nature of the thing itself about which mention is made, or on account of the use to which the speaker puts the word. On account of differences in the thing itself, the variation is made either with reference to the whole thing, or with reference to a part of it. Those forms which concern the whole are derived either on account of plurality or on account of smallness. On account of smallness, homunculus 'manikin' is formed from homo 'man,' and capitulum 'little head' from caput 'head.' On account of plurality, homines 'men' is made from homo 'man'; I pass by the fact that others use cervices 'muscles of the neck and shoulders' in the plural, and Hortensius in his poems uses it in the

singular cervix.

15. Those which are derived from a part, come either from the body, as *mammosae* 'big-breasted women' from *mamma* 'breast' and *manubria* 'handles' from *manus* 'hand,' or from the mind, as *prudentes* 'prudent men' from *prudentia* 'prudence' and *ingeniosi* 'men of talent' from *ingenium* 'innate ability.' The preceding are quite apart from movements; but where there are important motions, the derivatives are similarly from the mind or from the body, as *strenui* 'the quick' and *nobiles* 'the noble,' from *strenuitas* 'quickness' and *nobilitas* 'nobility,' and in this way also *pugiles* 'boxers' and *cursores* 'runners' from *pugnare* 'to fight' and *currere* 'to run.' As some derivations are from the mind and others from the body, so also there are others which refer to external things, as *pecuniosi* 'moneyed men' and *agrarii* 'advocates of agrarian laws,' because *pecunia* 'money' and *ager* 'field-land' are exterior to the men to whom the derivatives are applied.

16. It was for the use of the speakers that the case-forms were derived, that he who spoke of another might be able to make a distinction when he was calling, when he was giving, when he was accusing, and other differences of this same sort, which led us as well as the Greeks to the declension of nouns. The oblique forms which develop from the nominative are without dispute to be called cases; but there are those who question whether the nominative is properly a case. At any rate, we have six forms, and the Greeks five: he who is called, as (nominative) *Hercules*; how the calling is done, as (vocative) *Hercule*; whither there is a calling, as to (accusative) *Herculem*; by whom the calling is done, as by (ablative) *Hercule*; to or for whom there is a calling, as to or for (dative) *Herculi*; of whom the calling or called object is, as of (genitive) *Herculis*.

17. There are certain words which are like added family names, such as *Prudens* 'prudent,' *Candidus* 'frank,' *Strenuus* 'brisk,' and in them differences may be shown by a suffix, since the quality may be present in them to a greater or a smaller degree: therefore to these words a kind of inflection is attached, so that from *candidum* 'shining white' comes the comparative *candidius* and the superlative *candidissimum*, formed in the same way as similar forms from *longum* 'long,' *dives* 'rich,' and other words of this kind.

18. The terms which are derived for application to exterior objects, are for example *equile* 'horse-stable' from *equus* 'horse,' *ovile* 'sheepfold' from *oves* 'sheep,' and others in this same way; these are the opposite of those which I mentioned above, such as *pecuniosus* 'moneyed man' from *pecunia* 'money,' *urbanus* 'city man' from *urbs* 'city,' *atratus* 'clad in mourning' from *atrum* 'black.' Thus sometimes a place is named from a man, and then a man from this place, as Rome from *Romulus* and then Roman from Rome.

19. The nouns which relate to exterior objects are derived in sundry ways: those like *Latonius* 'Latona's child' and *Priamidae* 'Priam's sons,' which are derived from the names of their progenitors, are formed in one way, and those which come from an action are made in another way, such as *praeda* 'booty'

from praedari 'to pillage' and merces 'wages' from mereri 'to earn.' In the same way there are still others, which can be enumerated without difficulty; but because this category of words is now clear to the understanding and other matters press for attention, I pass them by.

20. Inasmuch as in the class of words which indicate also time-ideas there were these three time-ideas, past, present, and future, there had to be three sets of derived forms, as from the present saluto 'I salute' there are the past salutabam and the future salutabo. Since the persons of the verb were likewise of three natures, the one who was speaking, the one to whom the speaking was done, and the one about whom the speaking took place, there are these derivative forms of each and every verb; and these forms will be expounded in the account of the stock of verbs which is in use.

21. Since two points have been discussed, why derivation exists and to what products it eventuates, the remaining third point shall now be spoken of, namely, how and in what manner derivation takes place. There are two kinds of derivation, voluntary and natural. Voluntary derivation is that which is the product of the individual person's volition, directing itself apart from control by others. So, when three men have bought a slave apiece at Ephesus, sometimes one derives his slave's name from that of the seller Artemidorus and calls him Artemas; another names his slave Ion, from Ionia the district, because he has bought him there; the third calls his slave Ephesius, because he has bought him at Ephesus. In this way each derives the name from a different source, as he preferred.

22. On the other hand I call that derivation natural, which is based not on the volition of individuals acting singly, but on general agreement. So, when the names have been fixed, they derive the case-forms of them in like fashion, and in one and the same way they all say in the genitive case Artemidori, Ionis, Ephesi; and so on in the other cases.

23. Sometimes both are found together, and in such a way that in the voluntary derivation the processes of nature are noted, and in the natural derivation the effects of volition; of what sort these are, will be recounted below. Since in the two kinds of derivation some things approach likeness and others become unlike, the Greeks and the Latins have written many books on the subject: in some of them certain writers express the idea that in speaking men ought to follow those words and forms which are derived in similar fashion from like starting-points — which they called the products of Analogy; and others are of opinion that this should be disregarded and rather men should follow the dissimilar and irregular, which is found in ordinary habitual speech — which they called the product of Anomaly. But in my opinion we ought to follow both, because in voluntary derivation there is Anomaly, and in the natural derivation there is even more strikingly Regularity.

24. About these two kinds of derivation I shall write two sets of three books each: the first three about the principles of these derivations, and the

latter set about the products of these principles. In the former set the first book will contain the views which may be offered against likeness in derivation and declension; the second will contain the arguments against unlikeness; the third will be about the shape and manner of the likenesses. What I have set in order on these topics, I shall write in the three separate books; then on the second set of topics I shall begin to write, with due division into the same number of books.

25. Inasmuch as it is the task of this book to speak against those who follow likeness — which is like the relation of boy to old man in the matter of human life, and like that of girl to old woman, and in verbs is the relation of scribo ‘I write’ and scribam ‘I shall write’ — I shall speak first against Regularity in general, and then thereafter concerning its several subdivisions. I shall begin with the nature of human speech.

26. All speaking ought to be aimed at practical utility, and it attains this only if it is clear and brief: characteristics which we seek, because an obscure and longish speaker is disliked. And since clear speaking causes the utterance to be understood, and brief speaking causes it to be understood quickly, and since also habitual use makes the utterance clear and the speaker’s self-restraint makes it brief, and both these can be present without Regularity, there is no need of this Regularity. For if Regularity should instruct us whether we ought to say Herculi or Herculis for the genitive, as in the phrase ‘the club of Hercules,’ we must not fail to disregard its teaching, since both are in habitual use, and both forms are equally short and clear.

27. Besides, if from a thing one has secured that useful service for which it was invented, it is the act of a person with a great deal of idle time, to examine it further; and since the useful service for which names are set upon things is that the names should designate the things, then if we secure this result by habitual use alone, Regularity adds no gain.

28. There is the additional fact that in those things which are taken into our daily life for use, it is our practice to seek utility and not to seek resemblance; thus in the matter of clothing, although a man’s toga is very unlike his tunic, and a woman’s stola is very unlike a pallium, we make no objection to the difference.

29. In the case of buildings, although we do not see the peristyle bearing resemblance to the atrium nor the sleeping-room bearing resemblance to the horse-stable, still, on account of the utility in them we seek for unlikenesses rather than likenesses; so also we provide winter dining-rooms and summer dining-rooms with a different equipment of doors and windows.

30. Therefore, since difference prevails not only in clothing and in buildings, but also in furniture, in food, and in all the other things which have been taken into our daily life for use, the principle of difference should not be rejected in human speech either, which has been framed for the purpose of use.

31. But if one should think that the sum of those natural goals to which we

ought to attain in actual use consists of two items, that of utility and that of refinement, because we wish to be clothed not only to avoid cold but also to appear to be decently clothed; and we wish to have a house not merely that we may be under a roof and in a safe place into which necessity has crowded us together, but also that we may be where we may continue to experience the pleasures of life; and we wish to have table-vessels that are not merely suitable to hold our food, but also beautiful in form and shaped by an artist — for one thing is enough for the human animal, and quite another thing satisfies human refinement: any cup at all is satisfactory to a man parched with thirst, but any cup is inferior to the demands of refinement unless it is artistically beautiful: — but as we have digressed from the matter of utility to that of pleasure, it is a fact that in such a case greater pleasure is often got from difference of appearance than from likeness.

32. On this account, identical rooms are often ornamented in unlike manner, and couches are not all made the same in size and shape. But if Regularity were to be sought in furniture, we should have all the couches in the house made in one fashion, and either with posts or without them, and when we had a couch suited for use beside the dining-table, we should not fail to have just the same for bedroom use; nor should we rather be delighted with furniture which was decorated with varying figures of ivory or other materials, any more than in camp-beds, which with regularity are almost always made of the same material and in the same shape. Therefore either we must deny that differences give pleasure, or, since we must admit that they do, we must say that the un-likeness in words which is found in habitual usage, is not something to be avoided.

33. But if we must follow Regularity, either we must observe that Regularity which is present in ordinary usage, or we must observe also that which is not found there. If we must follow that which is present, there is no need of rules, because when we follow usage, Regularity attends us. But if we ought to follow the Regularity which is not present in ordinary usage, then we shall ask, When any one has made two words in four forms according to the same pattern, must we employ them just the same, even though we do not wish to — as for example a dative Iuppitri and an accusative Marspitrem? If any one should persist in using such ‘regular forms,’ he ought to be rebuked as crazy. This kind of Regularity, therefore, is not to be followed.

34. But if the proper thing is that all words that start from similar forms should be inflected similarly, it follows that from dissimilar starting forms dissimilar forms should be made by inflection; and this is not what is found. For from like forms some like forms are made, and other unlike forms, and from unlike forms also come some like forms and some unlike forms. For instance, from likes come likes, as from bonus ‘good’ and malus ‘bad’ come the neuter forms bonum and malum; also from likes come unlikes, as from lupus ‘wolf’ and lepus ‘hare’ come the unlike datives lupo and lepori. On the other hand, from unlikes there are unlikes, as from the nominatives Priamus

and Paris come the datives Priamo and Pari; also from unlikes there are likes, as nominatives Iupiter 'Jupiter,' ovis 'sheep,' and datives Iovi and ovi.

35. So much the more now must it be denied that Regularities exist, because not only are unlikes made from likes, but also from identical words unlikes are made, and not merely likes, but identicals are made from unlikes. From identical names unlikes, it is clear, are made, because while there are two towns named Alba, the people of the one are called Albani and those of the other are called Albenses; while there are three cities named Athens, the people of the one are called Athenaei, those of the second are Athenaiis, those of the third Athenaeopolitae.

36. Similarly, many words made in derivation from different words are found to be identical, as when I say accusative Luam from Saturn's Lua, and also luam as future of luo 'loosing.' Almost all our names of men and women are unlike in the nominative case of the plural, but are identical in the dative: unlike, as the men Terentii, the women Terentiae, but identical in the dative, men Terentiis and women Terentiis. Unlike are Plautus and Plautius, Marcus and Marcius; and yet there is a form common to both, namely the genitive Plauti and Marci.

37. Finally, if Regularity does exist for the reason that in many words there is a likeness of the word-forms, it follows that because there is unlikeness in a greater number of words the principle of Regularity ought not to be followed in actual talking.

38. In the last place, if Regularity does exist in speech, it exists either in all its parts or in some one part; but it does not exist in all, and it is not enough that it exists in some one part, just as the fact that an Ethiopian has white teeth is not enough to justify us in saying that an Ethiopian is white: therefore Regularity does not exist.

39. Since those who declare that Regularities exist, promise that the inflected forms from like words will be alike, and since they then say that a word is like another word only if it can be shown that starting from the same gender and the same inflectional form it passes in like fashion from case to case, those who make these assertions show their ignorance both of that in which the likeness must be found and of how the presence or absence of the likeness is wont to be recognized. Since they are ignorant of these matters, it follows that we ought not to follow them, inasmuch as they are unable to pronounce with authority on the subject of Regularity.

40. For I ask whether by a 'word' they mean the spoken word which consists of syllables, that word which we hear, or that which the spoken word indicates, which we understand, or both. If the spoken word must be like another spoken word, it makes no difference whether what it indicates is male or female, and whether it is a proper name or a common noun; and yet the supporters of Regularity say that these factors do make a difference.

41. But if that which is denoted by like words ought to be like, then Dion and Theon, which they themselves say are almost identical, are found to be

unlike, if the one is a boy and the other an old man, or one is white and the other an Ethiopian; and likewise if they are unlike in some other respect. But if the word must be like in both directions, there will not quickly be found one that is not defective in one respect or the other, nor will *Perpenna* and *Alfena* prove to be alike, because the one name denotes a man and the other a woman. Therefore, since they are unable to show wherein the likeness must exist, those who assert that Regularities exist are utterly shameless.

42. The other matter that I have mentioned, how the likeness is to be recognized, they clearly fail to appreciate in that they set up a precept that only when the passage is made from the nominatives to the vocative forms can it be said whether the nominatives are like or unlike; for this would be as if a man, on seeing the *Menaechmus* twins, should say that he could not decide whether or not they were alike, unless he should scrutinize their children, to see if they showed any differences from one another.

43. Nothing, I say, whereby that which you are comparing with the other may be made more like it or less like it, ought to be brought in from outside, for the purpose of aiding the decision. Therefore, since they do not know in what way the likeness ought to be drawn, they are incompetent to speak about Regularity. I should have said this more plainly, if I were not wishing now to speak more briefly because later on a these matters are to be treated at greater length. Accordingly it is sufficient now to have touched upon them as far as is connected with the general nature of words.

44. I shall next speak of what concerns the individual parts of speech. Since there are several methods of division thereof, I shall now take by preference that by which speech is according to its nature divided into four parts: that which has case-forms, that which has time-forms, that which has neither, that in which both case and time are indicated. Some grammarians call these the parts respectively of naming, saying, supporting, joining: the part of naming is said to be such words as *homo* 'man' and *Nestor*, that of saying such as *scribo* 'I write' and *lego* 'I read,' that of joining such as *scribens* 'writing' and *legens* 'reading,' that of supporting such as *docte* 'learnedly' and *commode* 'suitably.'

45. The kinds of naming are four, of which the words which are like (masc.) *quis*, (fem.) *quae* 'which' have by certain grammarians been called Provocables; those like *scutum* 'shield' and *gladium* 'sword' have been called Vocables; those like *Romulus* and *Remus* have been called Proper Nouns; those like (masc.) *hic*, (fem.) *haec* 'this' have been called Pronouns. The two middle kinds are called Denominations; the first and last are called Articles. The first class is indefinite, the second is almost indefinite, the third is almost definite, the fourth is definite.

46. Each of these ought to be threefold in nature, as concerns gender, number, and case: gender, whether it is masculine or feminine or neuter, as masc. *doctus*, fem. *docta*, neut. *doctum* 'learned'; number, whether it denotes one or more, as masc. sing. *hic*, pl. *hi* 'these,' and fem. sing. *haec*, pl. *hae*;

case, whether it is in the nominative, as *Marcus*, or in an oblique case, as *Marco*, or in a non-distinctive case-form, as *ovis* 'sheep.'

47. Now that these divisions have been made, examine them one by one, that you may the more easily see that there are nowhere any Regularities which we ought to follow. To be sure some words had to have three several forms, as in this example: masc. *humanus*, fem. *humana*, neut. *humanum* 'human'; but some have only two apiece, like *cervus* 'stag,' *cerva* 'hind,' and certain others have but one, like *aper* 'boar'; and so on with many others. Therefore Regularity simply does not exist in classes of this sort.

48. In number also, as *pater* 'father' denotes one and *patres* 'fathers' denotes more than one, all ought in this fashion to have two forms. But many are singulars only, like *cicer* 'chickpea' and *siser* 'skirret' — for nobody says *cicera* and *sisera* in the plural; and there are words that are plurals only, such as *salinae* 'saltworks' and *balneae* 'public baths': for from these there are no singulars *salina* and *balnea* in use. Nor from the singular *balneum* does general usage make a plural: for because *balneum* 'bath' is like *praedium* 'farm estate,' there ought to be plurals, *balnea* as well as *praedia*, but this is not the case. Therefore in these also there is no Regularity.

49. Some have both nominatives and oblique cases, others have nominatives only, others oblique cases only: both, as in nom. *Iuno*, gen. *Iunonis*; nominatives only, as in *Iupiter*, *Maspiter*; oblique cases only, as in gen. *Iovis*, dat. *Iovi*. Therefore in these Regularity does not exist.

50. Now let us look into those of the fourfold division. First, if there were Regularity in the indefinite articles, the proper forms would be feminine *quae*, gen. *quaius*, like masculine *quis*, gen. *quoius*; and as *quoi* is dative to masculine *quis*, so *quae* would be used as dative to feminine *qua*. For it is similar by proportion: *dea bona qua* 'a good goddess who' is like *deae bonae quae* 'to a good goddess to whom.' Similarly, the nom. masc. *ques* stands in the same relation to acc. *quos*, as the sing. masc. *quis* to the acc. *quem*; therefore for the *qui homines* 'which men' which is now used in the nominative, we ought to say *ques*.

51. Besides, as from masc. *is* 'this' there is dat. *ei*, so from fem. *ea* there would be spoken a dat. *eae*, which is now actually spoken as *ei*; and like the dat. pl. in *ieis viris* 'to these men,' there would be pronounced a dat. pl. fem. *eais mulieribus* 'to these women.' And as in the nominatives there are masc. *is*, fem. *ea*, in the oblique forms there would be masc. *eius*, fem. *eaius*; but now *eius* is said for the genitive not only in the masculine and the feminine alike, but even in the neuter articles, as *eius viri* 'of this man,' *eius mulieris* 'of this woman,' *eius pabuli* 'of this fodder,' although masc. *is*, fem. *ea*, neut. *id* are distinguished in the nominative. I have touched upon this classification more sparingly, because I am of opinion that the copyists will not take proper care in transferring these quite confusing matters.

52. From the appellations which come nearest to the indefinite nature of the articles and are called common nouns, such as *homo* 'man' and *equus*

'horse,' there are four kinds of derivation: one of name-giving, as *equile* 'horse-stable' from *equus* 'horse'; the second that of the cases, as accusative *equum* from *equus*; the third that of augmentation, as *albius* 'whiter' from *album* 'white'; the fourth that of diminution, as *cistula* 'little box' from *cista* 'box.'

53. The first class, as I have said, is that in which words in the nominative are derived from some part of speech, as *balneator* 'bath-keeper' from *balneae* 'public baths.' This class has in general three sources, because it develops from a common noun, as *venabulum* 'hunting spear' from *venator* 'hunter,' and from a proper name, as *Tiburs* 'man of Tibur' from *Tibur*, and from a verb, as *cursor* 'runner' from *currere* 'to run.' In none of these will you see Regularity preserved.

54. First, although from *ovis* 'sheep' and *sus* 'swine' there are said *ovile* 'sheepfold' and *suile* 'hog-sty,' there is no *bovine* from *bos* 'ox'; and although *avis* 'bird' and *ovis* 'sheep' are alike, we do not say *oviarium* from *ovis* as we say *aviarium* 'aviary' from *avis*, nor do we say *avile* from *avis* as we say *ovile* 'sheepfold' from *ovis*; and although there ought to be a *sediculum* 'chair' from *sessio* 'sitting' like *cubiculum* 'sleeping-room' from *cubatio* 'reclining,' there is not.

55. Since a shop where wine is sold is called *vinaria* from *vinum* 'wine,' and *cretaria* from *creta* 'chalk,' *unguentaria* from *unguentum* 'perfume,' then if words went in regular fashion a shop where *caro* 'meat' is sold would be called *carnaria*, one where *pelles* 'hides' are sold would be called *pelliarina*, one where *calcei* 'shoes' are sold would be called *calcearia*, instead of *laniena* 'butcher's shop,' *pellesuina* 'leather-shop,' *sutrina* 'cobbler's shop.' And just as from *unus* 'one' comes the plural *uni* 'one set of,' and from *tres* 'three' comes *trini* 'three each,' from *quattuor* 'four' *quadrini* 'four each,' so from *duo* 'two' there should be a *duini* and not a *bini* 'two each'; also, after *quadrigae* 'team of four' and *trigae* 'team of three,' there should be rather *duigae* than *bigae* 'team of two.' There are a great many examples of this class, but I pass them by, since he who has had his attention called to them cannot fail to notice them.

56. If words which develop from proper names ought to be alike if from like names, then since *Parma* and *Roma* are identical we shall say *Romenses*, like *Parmenses*; or since *Roma*, *Nola*, *Parma* are alike, we shall say *Parmani*, like *Romani* and *Nolani*. And from *Pergamum* and *Ilium* we shall have not only *Pergamenus* 'Pergamene,' but also *Ilienus*; or like *Ilius* and *Ilia* 'Iliau' male and female, we shall say *Pergamus* and *Pergama* respectively for a man and a woman of *Pergamum*. And since *Asia* and *Libya* are like names, we shall call the people *Asiatic* and *Libyatic*.

57. The words which are made from verbs are such as *scriptor* 'writer' from *scribere* 'to write' and *lector* 'reader' from *legere* 'to read'; that those also do not preserve a likeness can be seen from the following: although *amator* 'lover' from *amare* 'to love' and *salutator* 'saluter' from *salutare* 'to

salute' are formed in like manner, there is no cantator 'singer' from cantare 'to sing'; and though we say "I am tired with metendo 'reaping' and ferendo 'carrying,'" the words from these do not represent a like relation, since there is no fertor 'carrier' made like messor 'reaper.' There are likewise many others of this class in which we follow usage rather than conformity to the verbs.

58. Besides these there are other words which also originate from verbs but are unlike those of which we have already spoken, because they have both cases and tenses, whence they are called participles. And as many verbs have opposite forms, such as amo 'I love,' amor 'I am loved,' lego 'I read,' legor 'I am read,' from amo and all verbs of this kind there develop present and future participles, such as amans 'loving' and amaturus 'about to love,' but from these verbs the third form which ought to be made, namely the past participle, cannot be found in the Latin language: therefore there is no Regularity. So also from amor 'I am loved,' legor 'I am read,' and verbs of this kind the word of this class is made for past time, as amatus 'loved,' but from them none is made for the present and the future.

59. Therefore there is no Regularity, especially since such a great number of words has perished in this class which we are mentioning. In these verbs which have not both voices, such as loquor 'I speak' and venor 'I hunt,' we none the less say loquens 'speaking' and venans 'hunting,' locuturus 'about to speak' and venaturus 'about to hunt,' locutus 'having spoken' and venatus 'having hunted.' This is not according to the Regularities, since we say loquor and venor, not loquo and veno, whence came the forms given above. The Regularities are the less preserved, because some of the verbs which have not both voices, make three participles each, like those which I have named, and other make only two each, such as those which I shall now name: currens 'running' and ambulans 'walking,' cursurus 'about to run' and ambulaturus 'about to walk'; for the third forms, those of the past, do not exist, as in cursus sum 'I am run,' ambulatus sum 'I am walked.'

60. But Regularity is not preserved even in those which indicate that something is done with greater frequency; for though there is a cantitans 'repeatedly singing' from cantare 'to sing,' there is no amitans 'repeatedly loving' from amare 'to love,' and similarly with many others. The situation is the same in the forms of the plural as in those of the singular: though the plural cantitantes is used, seditantes 'sitting' is not.

61. Since there is a class of words which they call compositional, saying that they ought not to be grouped in the same category with the simple words of which I have so far spoken, I shall deal separately with these compounds. Since from tibiae 'pipes' and canere 'to play' the tibicines 'pipers' are named, they ask, If we ought to follow the Regularities, why then from cithara 'lute' and psalterium 'psaltery' and pandura 'Pan's strings' should we not say citharicen 'lute-player' and the rest in the same way? If from aedes 'temple' and tueri 'to guard' the aeditumus 'sacristan' is named, why from atrium

‘main hall’ and *tueri* ‘to guard’ is it not *atrimentum* ‘butler’ rather than *atriensis*? And if from *avis capere* ‘to catch birds’ the *auceps* ‘fowler’ is named, they say, from *piscis capere* ‘to catch fish’ there ought to be a *pisciceps* ‘fisherman’ named like the *auceps*.

62. They remark also that establishments where *aes* ‘copper’ *lavatur* ‘is refined’ are called *aerariae* ‘smelters’ and not *aerelavinae* ‘copper-washery’; and places where *argentum* ‘silver’ *foditur* ‘is mined’ are called *argentifodinae* ‘silver-mines,’ but that places where *ferrum* ‘iron’ is mined are not called *ferrifodinae*; that those who *caedunt* ‘cut’ *lapides* ‘stones’ are called *lapicidae* ‘stone-cutters,’ but that those who cut *ligna* ‘firewood’ are not called *lignicidae*; that there is no term *argentifex* ‘silversmith’ like *aurifex* ‘goldsmith’; that a person who is not *doctus* ‘learned’ is called *indoctus*, but one who is not *salsus* ‘witty’ is called *insulsus*. Thus the words which come from this source also, it is easy to see, do not observe Regularity.

63. It remains to consider the problem of the cases, on which the Aristarcheans especially exert their energies.

First, if in these there were Regularity, they say that all names and articles ought to have the same number of cases; but that as things are some have one only, like all individual letters, others have three, like *praedium praedii praedio* ‘farm,’ others four, like *mel mellis melli melle* ‘honey,’ others five, like *quintus quinti quinto quantum quinte* ‘fifth,’ others six, like *unus unius uni unum une uno* ‘one’; therefore in cases there are no Regularities.

64. Second, in reference to what Crates said as to why those which have only one case-form each are not used in the forms alpha, dat. *alphati*, gen. *alphatos*, because they are Greek letters — if the same answer is given to me as to Crates, that they are not our words at all, but utterly foreign words, then I shall ask why the same persons use a full set of case-forms not only for our own personal names, but also for those of the Persians and of the others whom they call barbarians.

65. Wherefore, if these proper names were in a state of Regularity, either they would use them with a single case-form each, like the words of the Phoenicians and the Egyptians, or with several, like those of the Gauls and of the rest: for they say nom. *alauda* ‘lark,’ gen. *alaudas*, and similarly other words. But if, as they write, they say that the Greek letters received names with but one case-form each for the reason that they really belong to the Phoenicians, then in this way the Greeks ought to speak our words in six cases each, not in five: inasmuch as they do not do this, there is no Regularity.

66. If Regularity existed, they say, no case ought to be used in two forms; but the opposite is found to occur. For without censure quite commonly some say in the ablative singular *ovi* ‘sheep’ and *avi* ‘bird,’ others say *ove* and *ave*; in the plural, the nominative is *puppis* ‘ship’s sterns’ and *restis* ‘ropes,’ also *puppēs* and *restēs*; likewise there is the fact that in the genitive plural of words of this class there are used the variant forms *civitatum* ‘of states,’ *parentum* ‘of parents,’ and *civitatum*, *parentium*, and in the accusative plural *monies*

‘mountains,’ fontes ‘springs,’ and montis, fontis.

67. Likewise they say that, if there is Regularity, like forms ought to be made from like words declined alike, and that this can be shown not to take place; that therefore this theory is to be rejected. And yet this failure can be shown; for how can anything be more alike than gens ‘clan,’ mens ‘mind,’ dens ‘tooth’? Despite which their genitives and accusatives in the plural are unlike; for from the first word are made gentium and gentis, with I in both, from the second come mentium and mentes, with I in the former only, from the third dentum and denies, with I in neither form.

68. So likewise since surus ‘stake,’ lupus ‘wolf,’ lepus ‘hare’ are alike in the nominative, they ask why there is not said in like fashion suro, lupo, lepo. But if the answer is given that they are not alike, because in the vocative we use the unlike forms sure, lupe, lepus (this to be sure is what Aristarchus wished to say in reply to Crates; for when Crates had written that Philomedes, Heraclides, Melicertes were alike, he said that they were not alike, because in the vocative Philomedes is said with a short E, Heraclide with a long E, Melicerta with a short A), in this, they say, Aristarchus did not realize that he was not giving a solution of the question that was asked.

69. For in this way, whenever there was any difference in the oblique cases, he could say that for this reason the nominatives were not alike; but since the question is whether the two nominatives are like each other, or not, there should be nothing brought in from outside, they say, as to why they are alike or different.

70. Likewise if there were Regularity, then just as they say in like fashion the nominatives aves ‘birds,’ oves ‘sheep,’ sues ‘swine,’ they would say in the genitive suium just as they do avium and ovium. If there is Regularity, he says, why do the people say dei ‘gods’ in Dei Penates ‘Household Gods’ and Dei Consentes ‘United Gods,’ although in the nominative singular deus ‘god’ is just like reus ‘defendant,’ ferreus ‘of iron,’ and so the plurals should be reei, ferreei, deei?

71. Likewise they ask, if Regularity exists, why do people all say the Temple Deum Consentium ‘of the United Gods’ and not Deorum Consentium? Likewise, why do they say a thousand denarium ‘of denarii’ and not a thousand denariorum? For this word denarius is in form exactly like Vatinius and Manilius, and therefore denariorum ought to be used as genitive, like Vatiniurum and Maniliurum. They say also that a cavalryman’s horse is worth not a thousand assarium ‘of assarii,’ but a thousand assariorum; for from the singular assarius comes the plural assarii, and from that should come the genitive assariorum.

72. Likewise, according to their theory, it is with long second syllables that we should pronounce Hectōrem and Nestōrem; for the accusatives quaestorem praetorem Nestōrem, and the genitives quaestōris praetōris Nestōris correspond to the nominatives quaestor praetor Nestor. And we ought not to say quibus das ‘to whom you give,’ his das ‘to these you give’; for it is dative

his and quis, like nominative *hi* and *qui*, or else it is *hibus* like *quibus*.

73. Although the dative *patri familias* 'to the father of the household' is used, still, if they wished to follow Regularities, they ought never to have said nominative *pater familias*, because the word is genitive *familiae*, like *Atinia* and *Catinia*, and therefore nominative *familia*, like *Atinia* and *Catinia*. Likewise, they ought not to say *patres familias* 'fathers of a household,' but as *Sisenna* writes, they should say *patres familiarum* 'fathers of households.'

74. Nor ought usage to fluctuate, in that some said *herds boum* 'of cattle,' others *boverum*, and others said *statues Ioum* 'of Jupiters,' others *Ioverum*, since like the genitive *Iovis bovis struis* were the accusative *Iovem bovem struem* and the dative *Iovi bovi strui*; and since these agreed in the oblique cases, they ought not to have varied in the nominative forms, in which it is now customary to use different formations, *Iupiter* for *Ious*, *bos* for *bous*, *strues* 'heap of offering-cakes' for *strus*.

75. Next I shall speak of a second class of words, in which degrees of comparison are made, like *album* 'white,' *albius* 'whiter,' *albissumum* 'whitest,' in which likewise it is clear that the Regularities are not preserved. For whereas *salsum* 'salty' and *caldum* 'hot' are alike, and from these are made the comparatives *salsius* and *caldius*, and the superlatives *salsissimum* and *caldissimum*, there should be made from *bonum* 'good' and *malum* 'bad,' since these are alike, the comparatives *bonius* and *malius*, the superlatives *bonissimum* and *malissimum*. But are not the actual forms in use *bonum melius optimum*, and *malum peius pessimum*?

76. In some words no form is lacking; for example, *dulcis* 'sweet,' *dulcior*, *dulcissimus*. In others the first or positive degree is lacking, as *peium* from *peius* 'worse,' *pessimum* 'worst'; in others the second is lacking, as *caesior* from *caesius* 'blue-eyed,' superlative *caesissimus*; in still others two are lacking which are derived from the same word, and these in such a way that in some instances the second and the third are lacking, as *manius* and *manissime* in connexion with the adverb *mane* 'early in the morning'; that in others the first two are wanting, as *optum* and *optius* from *optimum* 'best'; and that in others the first and the third are lacking, as *melum* and *melissumum* from *melius* 'better.'

77. Besides, if they were spoken in like manner, then since *macer* 'lean' and *tener* 'tender' are alike, and their superlatives *macerrimus* and *tenerrimus*, there would be no difference in their comparatives *macrior* and *tenerior*, nor would some such words have three syllables and others four. And if likeness ruled in such words, then just as we say *candidissimus* 'most shining' and fem, *candidissima*, *pauperrimus* 'poorest' and fem, *pauperrima*, so we should say *candidus* 'shining' and fem. *Candida*, *pauper* 'poor' and fem, *paupera*. And as we say *docius* 'learned' and fem, *docta*, *doctissimus* 'most learned' and fem. *doctissima*, so we should say *frugalissimus* 'most thrifty' and fem, *frugalissima*, *frugalus* 'thrifty' and fem. *frugala*.

78. And if words were in regular relation to each other, as with one word

we call a man and a woman sapiens 'wise' and diligens 'diligent,' sapientior 'wiser' and diligentior 'more diligent,' so we should speak in the same way when we had come to the superlative — a thing which we now do quite otherwise: for we call a man sapientissimus and diligentissimus, a woman sapientissima and diligentissima. As for examples of words of this class, there are many still remaining; but those which have been mentioned are enough for the formation of a judgement why in the comparison of words we do not have to follow Regularities.

79. Whereas there can be a set of three words to indicate size, like cista 'casket,' cistula, cistella, in some the middle terms do not exist, as in these: macer 'lean,' macricolus, macellus, and niger 'black,' nigricolus, nigellus. Likewise in certain words the terms for least size do not exist, such as avis 'bird,' avicula, avicella, and caput 'head,' capitulum, capitellum. Since in this class of words there are many forms lacking, we must say that in it theory must not be followed rather than usage.

As to the four classes of common nouns, I have said enough; and it can easily be observed that here usage governs rather than Regularities.

80. The matter of proper nouns now follows, which differ from common nouns in that they are definite and denote special things, like the names Paris and Helen, while common nouns are indefinite and indicate general ideas, like vir 'man' and mulier 'woman.' Among these there are some proper names from proper names, like Ilium from Ilus, and Ilia from Ilium; others are from a common noun, like Albius from album 'white,' Atrius from atrum 'black.' In neither set is Regularity preserved: for inasmuch as from Romulus comes the name Roma, there is not the form which should have come into existence by regular relation, namely, Romula and not Roma.

81. Likewise, Perpenna ought to be the daughter of Perpennus, not the son of Perpenna. For Perpenna ought to be the name of a woman, and to mean a child of Perpennus; this is like masculine Arvernus, Percelnus, feminine Arverna and Percelna, so also Perpennus and Perpenna. But if Marcus Perpenna is a man's name and Regularity is to be followed, then Lucius Aelia and Quintus Mucia will have to be men's names. Likewise the names which they use derived from Rhodus 'Rhodes,' Andros, and Cyzicus, are Rhodius 'Rhodian,' Andrius 'Andrian,' and Cyzicenus 'Cyzicene'; but if made in like manner the last ought to be Cyzicius, and each name ought to denote a citizen of the place: not as a certain rhetorician is called Athenaeus, although he is not an Athenian by birth.

82. In this very matter, then, there is no Regularity, because some have names from the towns, others either have names from other sources or have names from towns from which they ought not to get them.

83. Most freedmen set free by a free town get their names from the town; in this matter, those who were slaves of guilds and temples have not observed the rule in the same way; and the freedmen of the Romans ought to have got the name Romanus, like Faventinus from Faventia and Reatinus from Reate.

In this way the freedmen whose parents were state slaves would be named Romanus, who had been set free before they began to take the names of the magistrates who set them free.

84. From this practice came also such names as Lesas, Ufenas, Carrinas, Maecenas; since these are from the place of origin, like Urbinas, alongside Urbinius, there should from them have been formed, after the likeness of our names, the names Lesius, Ufenius. Carrinius, Maecenius....

BOOK IX

1.... They are a prey to extraordinary error, who prefer to teach what they do not know, rather than to learn that of which they are ignorant. In this position was the famous grammarian Crates, who placed his reliance on Chrysippus, a man of great acumen who left three books *On Anomaly*, and contended against *Regularity* and Aristarchus, but in such a way — as his writings show — that he does not seem to have understood thoroughly the intent of either. For Chrysippus, when he writes about the *Inconsistency* of speech, has as his object the showing that like things are denoted by unlike words and that unlike things are denoted by like words, as is true; and Aristarchus, when he writes about the *Consistency* of the same, bids us follow a certain likeness of words in their derivation, as far as usage permits.

2. But those who give us advice in the matter of speaking, some saying to follow usage and others saying to follow theory, are not so much at variance, because usage and regularity are more closely connected with each other than those advisers think.

3. For *Regularity* is sprung from a certain usage in speech, and from this usage likewise is sprung *Anomaly*. Therefore, since usage consists of unlike and like words and their derivative forms, neither *Anomaly* nor *Regularity* is to be cast aside, unless man is not of soul because he is of body and of soul.

4. But that what I am about to say may be more easily grasped, first there must be a clear distinction of three sets of relations; for most things are said indiscriminately in two ways, and of them some ought to be referred to one principle and others to other principles. First, the distinction of the relations of nature and use; for these are two factors which are diverse in the goals toward which they direct themselves, because it is one thing to say that *Regularities* exist in words, and another thing to say that we ought to follow the *Regularities*. Second, the distinction of the relations of extension and limitation, whether the use of the *Regularities* should be said to be proper in all words, or only in a majority of them. Third, the distinction in the relations of the speaking persons, how the majority of persons ought to observe the *Regularities*.

5. For some words and forms are the usage of the people as a whole, others belong to individual persons; and of these, the words of the orator and those of the poet are not the same, because their rights and limitations are not the same. Therefore the people as a whole ought in all words to use *Regularity*, and if it has a wrong practice, it ought to correct itself; whereas the orator ought not to use *Regularity* in all words, because he cannot do so without giving offence, and on the other hand the poet can with impunity leap across all the bounds.

6. For the people has power over itself, but the individuals are in its power; therefore as each one ought to correct his own usage if it is bad, so should the

people correct its usage. I am not the master — so to speak — of the people's usage, but it is of mine. As a helmsman ought to obey reason, and each one in the ship ought to obey the helmsman, so the people ought to obey reason, and we individuals ought to obey the people. Therefore, if you will take notice of each principle on which I shall base my argument in the matter of speaking, you will appreciate whether Regularity is said merely to exist, or it is said that we ought to follow it; and likewise you will appreciate that if the practice of speech ought to be reduced to Regularity, then this is meant for the people in a different sense from that in which it is meant for individuals, and that that which is taken from the entire body of speakers is not necessarily meant in the same form for him who is only an individual in the people.

7. Now I shall speak first in support of Regularity as a whole, why, as it seems, it not only should not be censured, but even should in practice be followed in a certain measure; and secondly, concerning the several charges against it, I shall give the arguments by which the objections can be refuted, arranging them in such a way that I shall include, item by item, those which have been narrated in the previous book and also those which can be presented but were passed over by me in that place.

8. First, as to their alleging that he who wishes to speak well ought to observe usage and not the theory of likenesses, because if he disregards the former he cannot do so without giving offence, and if he follows the latter it will not be without incurring rebuke: they are mistaken, because he who in speaking follows the usage which he ought to employ, is following it also without disregard of the theory.

9. For we see that nouns and verbs which we inflect in similar ways are in general usage, and we compare others with this usage, and if there is any error we make the correction with the help of usage. For if those who have arranged the dining-room have among the three couches set one that is of a different size, or among couches that match have brought one too far forward, or not far enough, we join in making the correction according to common usage and to the analogies of other dining-rooms; in the same way, if in speech any one in his utterance should so inflect the words as to speak irregular forms, we ought to revise his mistake according to the model of other similar words.

10. Now there are two kinds of wrong forms in inflection; one, that which has been erroneously accepted into general usage; the other, that which is not yet so accepted and may be called incorrect. The latter they grant ought not to be said, because it is not in usage, but as for the former they merely do not admit the propriety of saying it in this way; so that when they do this it is just as if they should grant that the boys ought to be corrected in case any of them in wilfulness begins to manage his feet awkwardly and to imitate the bowlegged, but should refuse to grant that one should be corrected if he in his habit of walking has already become bowlegged or knock-kneed.

11. Does it not follow that they act foolishly who fasten splints on the knees of children, to straighten their crooked leg-bones? Since even that

physician is not to be censured who makes a healthier man out of one who has been ill as a result of a long-continued bad habit, why should he be blamed who brings into better condition a way of speech which has been less effective on account of bad usage?

12. The painters Apelles and Protogenes, and other famous artists are not to be blamed because they did not follow the ways of Micon, Diores, Arimmas, and even earlier craftsmen; then must Aristophanes be condemned because in some things he followed reality rather than usage?

13. But if the wisest men have been praised because both in warfare and in other things they had dared do much that was against old usage, then they must be despised who say that usage ought to be considered as better than good theory.

14. Or when a person has been accustomed to do something wrong in civil life, shall we not only not tolerate him but even visit him with punishment — and yet if a person has the habit of saying a word wrong, shall we not correct him, when this may be done without actual punishment?

15. And these men who send their boys to school to learn how to write words which they don't know — shall we not likewise instruct these men, bewhiskered adults as they are, who do not know how the words ought to be spoken, that they may know by what logical theory they may properly be pronounced?

16. But as the nurse does not with suddenness tear her nurslings away from their wonted method of feeding, when she changes them from their first food to a better, so we ought to go gradually and judiciously in matters of speech, in changing older persons from less suitable words to those which accord with logical theory. Since among the illogical words which are in common usage there are some which can easily be eliminated, and others of such a sort that they seem firmly fixed, it is proper to correct at once in the direction of logic only those which are lightly attached and can be changed without giving offence; but those which are such that for the present you cannot make the correction so as not to speak them thus, these you ought, if possible, to refrain from using. For thus they will become unwonted and afterward, when already blurred to the memory, they can be more easily corrected.

17. Such new inflectional forms as are introduced by logical theory but are rejected by the speech of the forum, these the good poets, especially the dramatists, ought to force upon the ears of the people and accustom them to them. For the poets have great power in this sphere: they are responsible for the fact that certain words are now spoken with improved inflections, and others with worse. The usage of speech is always shifting its position: this is why words of the better sort are wont to become worse, and worse words better; words spoken wrongly by some of the old-timers are on account of the poets' influence now spoken correctly, and on the other hand some that were then spoken according to logical theory, are now spoken wrongly.

18. Therefore those who summon us to obey usage, we shall follow, if it be

to a correct usage. For in this also there is the principle of Regularity: if they invite us to that usage which is perverted and irregular, we shall not follow it unless it becomes necessary, any more than we follow bad examples in other things; for we do follow them too, though against our inclinations, when some force bears down upon us.

And in fact Lysippus did not follow the defects of the artists who preceded him, but rather their artistry; just so should the people do in their speech, and even the individuals, so far as it may be done without offence to the people as a whole.

19. There are some persons who not only hunt for lost articles, but even of their own initiative give any information which they may have: do the same persons, if something has been lost from speech, not only not exert themselves in hunting for it, but even fight against the informers, to keep it from being put back into its place?

20. As for a word that is new and has been introduced according to logical theory, we ought not for this to shun giving it a hospitable welcome.

For long-standing custom is not a hindrance to novelty in garments, buildings, and utensils, when it is a question of use; what victim of a habit does the love of that habit rather keep in rags, when the love of novelty is leading him toward new garments?

Are not old laws often annulled and succeeded by new laws?

21. Have not the forms of the old-fashioned pots and cups been swept into oblivion by the unfamiliar shapes of the vessels recently brought from Greece? Shall they then, on account of old-time habit, be unwilling to use these unsullied forms of words, which good reason has taught them? And do they claim that there is such difference between the two senses, that for their eyes that are always seeking some new shapes of their furniture, but they wish their ears to have no share in similar novelties?

22. Out of how many slave-owners is there now one who has slaves bearing the ancient names? What woman calls her outfit of clothing and jewelry by the old words? But it is not so much at the unlearned that anger must be felt, as at the advocates of this perversity.

23. For if there were Regularity in no place at all, then it follows that there would be none in words either; not that when it is everywhere present (as it is in fact), there is none in words.

For what part of the world is there which does not have countless Regularities? Sky or sea or land, what Regularities are there in these?

24. As in the sky there is a division from the Equator to the Tropic of Cancer, and from there to the Arctic Circle, is not also its counterpart, extending from the Tropic of Capricorn in the other direction, likewise divided into equal sections? Is it not a fact that as far as the North Pole is removed from the Arctic Circle and this from the Tropic of Cancer, around which the sun travels when it comes to the summer solstice, so far the South Pole is from that Circle which the astronomers call the Antarctic, and this

from the Tropic of Capricorn? Is it not true that in the fashion in which each constellation has risen in the sky this year, in just the same fashion it rises each and every year?

25. The sun does not come in one way from the Tropic of Capricorn to the Equator, does it, and on the other hand, when it comes to the Tropic of Cancer, return in a different way to the Equator and thence to Capricorn? The moon, when it goes away from the sun to the north and returns from there into the same path which the sun pursues, goes on from there to the south and comes back again in just the same way, does it not? But why should I speak further of the stars, in the case of which there is unusual difficulty in finding any irregularity which exists or takes place in their motions?

26. But in the sea, I suppose, the motions do not have the twofold likenesses — the motions which in twenty-four lunar hours change themselves four times, and when the tides have risen for six hours, and have ebbed for just as many, they likewise rise again, and in the same fashion ebb after this time. Or do they keep this Regularity for a day's space, and not likewise for a month, since similarly they have another set of motions which agree with one another? Of these I have written in the book which I composed On Tidal Inlets.

27. On the earth, is not Regularity preserved in the case of plantings? Does it not give us to-day fruits of precisely the same kind as it has given us in the past? Does it not regularly return to us a crop of barley when barley has been sown, even as it returns a crop of wheat when wheat has been sown? Does not Asia have rivers and lakes, mountains and plains, even as Europe has?

28. Is not Regularity preserved among the birds, according to their kind? As the progeny of eagles are eagles and the progeny of thrushes are thrushes, are not the progeny of the other birds all of their own proper and special kind?

Does the process go on in another way in the water, than in the air? Are not the shell-fish here all like their own kind, despite their countless number? Are not the fishes? Is a sea-bass or a sea-carp produced of a moray? Is not one head of cattle like another, when compared, and so also the calves which are procreated by them? Even where the offspring is unlike the parents, as the mule born of a he-ass and a mare, even there there is Regularity none the less: the offspring of any ass and mare whatsoever is a mule, male or female, as the offspring of a stallion and a she-ass is a hinny.

29. Are not in this way all the offspring of man and woman alike, in that they are boys and girls? Do these not have all their limbs mutually alike, in such a way that item by item they are pairs in likeness, in their own special kinds? As all are made up of soul and body, are not also the parts of soul and body alike with the same regularity?

30. What then of the fact that the souls of men are divided into eight parts — are these parts not mutually alike with regularity? Five with which we perceive, the sixth with which we think, the seventh with which we procreate, the eighth with which we utter articulate words? Therefore since the word

with which we talk is speech, speech also must by nature have its Regularities; and it does.

31. Do you not see that the Greeks have divided speech into four parts, one in which the words have cases, a second in which they have indications of time, a third in which they have neither, a fourth in which they have both — and that in the same way we have all these divisions? Do you not know that among them some words are definite, others not — and that both kinds are present in our language also?

32. For my part I have no doubt that you have observed the countless number of likenesses in speech, such as those of the three tenses of the verb, or its three persons.

Who indeed can have failed to join you in observing that in all speech there are the three tenses *lego* ‘I read,’ *legebam* ‘I was reading,’ *legam* ‘I shall read,’ and similarly the three persons *lego* ‘I read,’ *legis* ‘thou readest,’ *legit* ‘he reads,’ though these same forms may be spoken in such a way that sometimes one only is meant, at other times more? Who is so slow-witted that he has not observed also those likenesses which we use in commands, those which we use in wishes, those in questions, those in the case of matters not completed and those for matters completed, and similarly in other differentiations?

33. Therefore those who say that there is no logical system of Regularity, fail to see the nature not only of speech, but also of the world. Those who see it and say that it ought not to be followed, are fighting against nature, not against the principle of Regularity, and they are fighting with pincers, not with a sword, since out of the great sea of speech they select and offer in evidence a few words not very familiar in popular use, saying that for this reason the Regularities do not exist: just as if one should have seen a dehorned ox or a one-eyed man and a lame horse, and should say that the likenesses do not exist with regularity in the nature of cattle, men, and horses.

34. Those moreover who say that there are two kinds of Regularity, one natural, namely that lentils grow from planted lentils, and so does lupine from lupine, and the other voluntary, as in the workshop, when they see the stage as having an entrance on the right and think that it has for a like reason been made with an entrance on the left; and say further, that of these two kinds the natural Regularity really exists, as in the motions of the heavenly bodies, but the voluntary Regularity is not real, because each craftsman can make the parts of the stage as he pleases: that thus in the parts of men there are Regularities, because nature makes them, but there is none in words, because men shape them each as he wills, and therefore as names for the same things the Greeks have one set of words, the Syrians another, the Latins still another — I firmly think that there are both voluntary and natural derivations of words, voluntary for the things on which men have imposed certain names, as Rome from Romulus and the Tiburtes ‘men of Tibur’ from Tibur, and natural as those which are inflected for tenses or for cases from the imposed names,

as genitive Romuli and accusative Romulum from Romulus, and from dico 'I say' the imperfect dicebam and the pluperfect dixeram.

35. Therefore in the voluntary derivations there is inconsistency, and in the natural derivations there is consistency. Inasmuch as they ought not to deny the presence of both of these in speech, since they are in all parts of the world, and the derivative forms of words are countless, we must say that in words also the Regularities are present. And yet Regularity does not for this reason have to be followed in all words; for if usage has inflected or derived any words wrongly, so that they cannot be uttered in any other way without giving offence to many persons, the logic of speaking shows us that because of this offence the logic of the words must be set aside.

36. As far as concerns the general cause why likeness is present in speech and ought to be observed, and also to what extent this should be done, enough has now been said. Therefore in the following we shall set forth its several parts item by item, and refute the individual charges which they bring against the Regularities.

37. In this matter, you should take notice that by nature there are four elements in the basic situation to which words must be adjusted in inflection: there must be an underlying object or idea to be designated; this object or idea must be in use; the nature of the utterance which has designated it, must be such that it can be inflected; and the resemblance of the word's form to other words must be such that of itself it can reveal a definite class in respect to inflection.

38. Therefore it is not to be demanded that from terra 'earth' there should be also a terrus, because there is no natural basis that in this object there ought to be one word for the male and another for the female. Similarly, with respect to usage, while Terentius designates one person of the name and Terentii designates several, it is not to be demanded that in this way we should say faba 'bean' and fabae 'beans,' for the two are not subject to the same use. Nor is it to be demanded that as we say acc. Terentium from nom. Terentius, we should make case-forms from A and B, because not every utterance is naturally fitted for declensional forms.

39. The likeness which the word has in its shape must be investigated not in the comparison of the basis merely, but also sometimes in the effect which it has. For thus the Gallic wool and the Apulian wool seem alike to the inexperienced on account of their appearance, though the expert buys the Apulian at a higher price because in use it lasts better. These matters, which have been touched upon hastily here, will become clearer in a later discussion. Now I shall start.

40. To their question in what respect a word ought to be similar, sound or meaning, we answer that it should be so in sound. But yet sometimes we ask whether the objects designated are like in kind, and compare a man's name with a man's, a woman's name with a woman's: not because that which they designate affects the word, but because sometimes in case of an unlike thing

they set upon it forms of an equivalent appearance, and on a like thing they set unequal forms, as we call shoes women's shoes or men's shoes by the likeness of the shape, although we know that sometimes a woman wears men's shoes and a man wears women's shoes.

41. In like fashion, we say, a man is called *Perpenna*, like *Alfena*, with a feminine form; and on the other hand *paries* 'house-wall' is like *abies* 'fir-tree' in form, although the former word is used as a masculine, the latter as a feminine, and both are naturally neuter. Therefore those which we use as masculines are not those which denote a male being, but those before which we employ *hic* and *hi*, and those are feminines with reference to which we can say *haec* or *hae*.

42. For this reason it amounts to nothing, that on the premise that Regularity adopts the unlikenesses of the objects as a criterion for difference in the forms of the spoken word, they say that Theon and Dion are not alike if the one is an Ethiopian and the other is a white man.

43. As to what they say, that *Aristarchus* was shameless in his instructions that to see whether one name was like another you should view it not only from the nominative, but also from the vocative — for the same persons say that it is absurd to judge from the children whether the parents are alike: those who say this are mistaken, for it does not come about from their oblique cases that the nominatives are shown to be of like appearance, but through the oblique cases can be more easily seen what evidential force lies in the likeness of the nominatives — even as a lamp in the dark, when brought, does not cause that the things which are there should be alike, but that they should be seen in their real character.

44. What seems more closely alike than the last letter in the words *crux* 'cross' and *Phryx* 'Phrygian'? No one who hears the spoken words can by his ears distinguish the letters, although we know from the declined forms of the words that though alike they are not identical; because when the plurals *cruces* and *Phryges* are taken and *E* is removed from the last syllables, from the one there results *crux*, with *X* from *C* and *S*, and from the other comes *Phryx*, from *G* and *S*. And the difference is likewise clear, when *S* is removed; for the one becomes *cruce*, the other *Phryge*.

45. As to what they say, that since likeness does not exist in the greater part of speech, Regularity does not exist, they speak foolishly in two ways, because Regularity is present in the greater part of speech, and even if it should exist only in the smaller part, still it is there: unless they will say that we do not wear any shoes, because on the greater part of our body we do not wear any.

46. As to what they say, that we find unlikeness pleasing and acceptable rather than likeness, and therefore in clothing and in furniture we take pleasure in variety, and not in having our wives' undertunics all identical: I answer, that if variety is pleasure, then there is greater variety in that in which some things are alike and others are not; and just as a side-table is adorned

with silver in such a way that some ornaments are alike and others are unlike, so also is speech adorned.

47. They ask why, if likeness is to be followed, we prefer to have some couches inlaid with ivory, others with tortoise-shell, and so on with some other kind of material. To which I say that unlikenesses are not the only thing which we follow, but often we follow likenesses. And this may be seen from the same piece of furniture; for no one makes the three couches of the dining-room other than alike in material and in height and in shape. Who makes the table-napkins not like each other? Or the cushions? And finally the other things which are several in number but of one sort?

48. Since speech, they say, was introduced for the sake of utility, we should follow not that kind of speech which has likeness, but that which has utility. I grant that speech has been produced for utility's sake, but in the same way as garments have: therefore as in the latter we follow the likenesses, so that a man's tunic is like a man's, and a toga like a toga, and a woman's dress is like a dress regularly and a cloak like a cloak, so also, as words that are names of persons exist for the purpose of utility, we ought still to employ men's names that are like one another, and women's names that also have mutual resemblances.

49. As to the fact that they say that Regularity does not exist because there are no perfects *periacuit* 'remained lying' and *percubuit* 'remained lying,' like *persedit* 'remained sitting' and *perstitit* 'remained standing,' in this also they are mistaken: for the two perfects have no presents from which to be inflected, whereas Regularity promises only that from two like words inflected in like manner there will be like forms.

50. Those who say that there are no Regularities because from Romulus there is Roma and not Romula and there is no *bovia* 'cow-stables' from *bos* 'cow' as there is *ovilia* 'sheepfolds' from *ovis* 'sheep,' are in error; because nobody professes that one word is derived from another word, from nominative singular to nominative singular, but only that from two like words like case-forms develop when they are inflected in like manner.

51. They say that because the words denoting the Latin letters are not inflected into case-forms the Regularities do not exist. Such persons are demanding the declension of those words which by nature cannot be inflected; just as if Regularity were not said to belong merely to those forms which had already been inflected in like fashion from like words. Therefore not only in the names of the letters must this kind of Regularity not be sought, but not even in any syllable, because we say nominative *ba*, genitive *ba*, and so on.

52. But if any one should wish to say that in this also there are Regularities in the things, he can maintain it. For as they themselves say that some nouns, because they have five forms, have five cases, and others have four, and others fewer in like manner, they will be able to say that the letters and syllables which have one case-form apiece in sound, have several in connexion with the things; as they will compare only with each other those

which have four case-forms for the words, and likewise those which have three apiece, so let them compare with each other those which have only one form each, saying that nominative E, dative E is like nominative A, dative A.

53. As to the fact that they say that there are certain words which have declensional forms, like *caput* 'head,' genitive *capitis*, and *nihil* 'nothing,' genitive *nihili*, a match for which cannot be found, and therefore the Regularities do not exist, answer must be made that unquestionably any word which is the only one of its kind is outside the systems of Regularity; there must be at least two words for a likeness to be existent therein. Therefore, in this case, they eliminate the possible existence of the Regularities.

54. But the word *nihilum* 'nothing' is found in the nominative in the following:

The body she's given Earth doth herself take back, and of loss not a whit does she suffer, which is the same as 'nor of loss does she suffer anything.' This same word is found in an oblique case in Plautus:

I see, beside Philolaches you count all men as nothing.

The word is from *ne* 'not' and genitive *hili* 'whit'; therefore he has been called *nihili* 'of naught' who was not *hili* 'of a whit' in value. Change is made only in the case-forms of that about which the speaking is done, as about a man; for we say a man *nihili* 'of no account' in nominative, in genitive, in accusative, changing the forms of *homo* but not changing the form *nihili*. If we were to make changes in it, then we should say not *hic nihili* but *nihilum* as the nominative, like *linum* 'flax' and *libum* 'cake,' and dative not *huic nihili* but *nihilo* like *lino* and *libo*. The genitive case can however be said with various nouns set before it, like nominative *casus* 'mishap' *Terentii* 'of Terence,' accusative *casum Terentii*, and nominative *miles* 'soldier' *legionis* 'of the legion,' genitive *militis legionis*, accusative *militem legionis*.

55. They say that since every nature is either male or female or neuter, from the individual spoken words there should not fail to be forms of the words in sets of three, like *albus*, *alba*, *album* 'white'; that now in many things there are only two, like *Metellus* and *Metella*, *Aemilius* and *Aemilia*, and some with only one, like *tragoedus* 'tragic actor' and *comoedus* 'comic actor'; that there are the names *Marcus* and *Numerius*, but no *Marca* and *Numeria*; that *corvus* 'raven' and *turdus* 'thrush' are said, but the feminines *corva* and *turda* are not said; that on the other hand *panthera* 'panther' and *merula* 'blackbird' are used, but the masculines *pantherus* and *merulus* are not; that there is no one of us whose son and daughter are not suitably distinguished as male and female, as *Terentius* and *Terentia*; that on the other hand the children of gods and slaves are not distinguished in the same way, as by *Iovis* and *Iova* for the son and the daughter of Jupiter; that likewise a great number of common nouns do not in this respect preserve the Regularities.

56. To this we say that although the object is basic for the character of all speech, the words do not succeed in reaching the object if it has not come into our use; therefore *equus* 'stallion' and *equa* 'mare' are said, but not *corva*

beside *corvus*, because in that case the factor of unlike nature is without use to us. But for this reason some things were formerly named otherwise than they are now: for then all doves, male and female, were called *columbae*, because they were not in that domestic use in which they are now, and now, on the other hand, because we have come to make a distinction on account of their uses as domestic fowl, the male is called *columbus* and the female *columba*.

57. When the nature goes through the three genders and this distinction is made in use, then finally it is seen, as it is in *doctus* 'learned man' and *docta* 'learned woman' and *doctum* 'learned thing'; for learning can go across through these three, and use has taught us to differentiate a learned thing from human beings, and among the latter to distinguish the male and the female. But in a male or a female or what is neither, the nature of the male does not shift, nor that of the female, nor the neuter nature, and for this reason there is no saying of *feminus*, *femina*, *feminum*, and so with the rest. Therefore they are called by special and separate words.

58. Wherefore in the names of those things in which there is no likeness of nature or of use as the basis, a relation of this sort ought not to be sought. Accordingly, as a *surdus* 'deaf' man is a current term, and a *surda* woman, so also is a *surdum* theatre, because all three things are equally intended for the act of hearing. On the other hand, nobody says a *surdum* sleeping-room, because it is intended for silence and not for hearing; but if it has no window, it is called *caecum* 'blind,' as a man is called *caecus* and a woman *caeca*, because not all sleeping-rooms have the light which they ought to have.

59. The male and the female have by nature a certain association with each other; but the neuters have no association with them, because they are different from them in kind, and even of these neuters there are very few which have any elements in common with other neuters. As for the fact that the names of a god and of a slave do not vary like our free names, there is the same reason, namely that the variation is connected with use, and had to be established with reference to free persons, but as to the rest had no consequence, because among slaves the clan quality has no foundation in practice, but it is necessary in the names of us who are in *Latium* and are free. Therefore in that class Regularity makes its appearance, and we say *Terentius* for a man, *Terentia* for a woman, and *Terentium* for the genus 'stock.'

60. In first names the situation is not the same, because these were in practice established as individual names, by which the clan names might be differentiated; from the numerals came *Secunda*, *Tertia*, *Quarta* for women, *Quintus*, *Sextus*, *Decimus* for men, and similarly other names from other things. When there were two or more persons of the name *Terentius*, then that they might have something individual to distinguish them they marked them perhaps in this way, that he should be *Manius* who was said to have been born *mane* 'in the morning,' and he who has been born *luci* 'at dawn' should be *Lucius*, and he who was born *post* 'after' his father's death should be *Postumus*.

61. When any of these things happened to females as well, they derived the first names of women regularly in this manner — that is, in former times — and called them by them, for example, Mania, Lucia, Postuma: for we see that the mother of the Lares is called Mania, that Lucia Volumnia is addressed in the Hymns of the Salians, and that even now many give the name Postuma to a daughter born after the death of her father.

62. Therefore as far as the nature and the use of a word have jointly advanced, so far has Regularity been extended in like manner by a corresponding relationship, since of the words in which there are voluntary inflections of male and female and neuter, those which are voluntary in inflection ought not to be inflected in similar manner, but in those in which there are natural inflections there are those regular inflections which are actually found to exist. Therefore in the matter of the three genders they are unfair in setting aside the Regularities.

63. Moreover those who find fault with the Regularities, because some words are singulars only, like *cicer* ‘chickpea,’ and others are plural only, like *scalae* ‘stairs,’ although all ought to have the two forms, like *equus* ‘horse’ and *equi* ‘horses,’ forget that the foundation of Regularity is nature and use taken in combination. That is singular which by nature denotes one thing, like *equus* ‘horse,’ or which denotes things that by use are joined together in some way, like *bigae* ‘two-horse team.’ Therefore just as we say *una Musa* ‘one Muse,’ we say *unae bigae* ‘one two-horse team.’

64. Plural words are of two sorts, the one indefinite, like *Musae* ‘Muses,’ the other definite, like *duae* ‘two,’ *tres* ‘three,’ *quattuor* ‘four’; for as we say *Musae* in the plural, so also we say *unae bigae* ‘one two-horse team,’ and *binae* ‘two’ and *trinae bigae* ‘three two-horse teams,’ and so on. Wherefore *unae* and the masc. *uni* and the neut. *una* are in a certain manner as much singulars as *unus* and *una* and *unum*: the word changes in this way because the one set of forms is said of individual things, the other of things joined together in sets; and just as *duo* and *tria* are plurals, so also are *bina* and *trina*.

65. There is also a third class which is singular though expressed by a plural form, namely *uter* ‘which of two,’ in which the plural form is for example *utrei*: *uter poeta* ‘which of two poets’ in the singular, *utri poetae* ‘which of two sets of poets’ in the plural. Now that the nature of this has been explained it is clear that plural nouns are not all under obligations to have a like singular form; for all the numerals from two upwards are plural, and no one of them can have a singular to match it. Therefore it is quite wrongly that they demand that all singulars that there are, must have a corresponding plural form.

66. Likewise those who find fault because there are no plurals *aceta* and *gara* to *acetum* ‘vinegar’ and *garum* ‘fish-sauce’ like *unguenta* to *unguentum* ‘perfume’ and *vina* to *vinum* ‘wine,’ act ignorantly; they are looking for a plural name in connexion with things which come under the categories of quantity and weight rather than under that of number. For in *plumbum* ‘lead’

and argentum 'silver,' when there has been added an increase, we say multum 'much': thus multum plumbum or argentum, not plumba 'leads' and argenta 'silvers,' since articles made of these we call plumbea and argentea (silver is something else when it is argenteum, for that is what it is when it has now become a utensil; thus argenteum if it is a small cup or the like), because in this case we speak of many argentea 'silver' cups, and not of much argentum 'silver.'

67. But if those things which have by nature the idea of quantity rather than that of number, exist in several kinds and these kinds have come into use, then from the plurality of kinds they are spoken of in the plural, as for example vina 'wines' and unguenta 'perfumes.' For there is wine of one kind, which comes from Chios, another wine which is from Lesbos, and so on from other localities. Likewise unguenta 'perfumes' themselves are now properly spoken of in the plural, for of perfume there are now a number of kinds. If in like fashion there were great differences in olive-oil and vinegar and the other articles of this sort, in common use, then we should employ the plurals olea and aceta, like vina. Therefore in both these matters their attempt to destroy the Regularities is unfair, since they expect that the words will be alike though their uses are different, and since they think that articles which we measure and objects which we count should be spoken of in the same way.

68. Likewise they find fault with the Regularities, because public baths are spoken of as balneae, with the form in the plural, and not as balnea, in the singular; and on the other hand they speak of one balneum of a private individual, though they do not use the plural balnea. To them answer can be made, that fault ought not to be found because scalae 'stairs' and aquae caldae 'hot springs,' mostly with good reason, have been called by plural names and the corresponding singulars have not come into use: and vice versa. The first balneum 'bath-room' (the name is Greek), when it was brought into the city of Rome, was as a public establishment set in a place where two connected buildings might be used for the bathing, in one of which the men should bathe and in the other the women. From the same logical reasoning each person called the place in his own house where baths were taken, a balneum; and they were not accustomed to speak of balnea in the plural, because they did not have two in one house — though our forbears were accustomed to call this not a balneum, but a lavatrina 'wash-room.'

69. So also, the hot springs, on account of the locality and the water which gushed out there, came to be frequented for our use, since some of the springs were beneficial to one disease and others to another; and because those which they used were several in number, as at Puteoli and in Etruria, they called them by a plural word rather than by a singular. So also with the scalae 'stairs'; because they are named from scandere 'to mount' and there were separate steps to be mounted, it would be a more difficult problem to answer if they had called them scala, in the singular, inasmuch as the origin of the name shows their plural nature.

70. Likewise they find fault about the cases, because some nouns have nominative forms only, and others have only oblique forms: whereupon they say that all words ought to have both the nominative and the oblique forms. To them the same answer can be given, that there is no Regularity in those instances which lack a relationship in use or in nature....

71. But they should not look for complete Regularity even in these names which are derived by passage from one nominative form to another. Still, such words do not in general depart from the path of logic without valid reason, such as there is for those gladiators who are called Faustini; for though most gladiators are spoken of in such a way that they have the last three syllables alike, Cascelliani, Caeciliani, Aquiliani, let them take note that the names from which these come, Cascellius, Caecilius, Aquilius on the one hand, and Faustus on the other, are unlike: if the name were Faustius, they would be right in saying Faustiani. In the same way, from Scipio some make the bad formation Scipionini; it is properly Scipionarii. But, as I have said, since appellations are rarely derived from surnames of this kind and they are not fully at home in use, some such formations fluctuate in form.

72. Likewise they say, that although stultus 'stupid' and luscus 'one-eyed' are like words, and stultus is compared with stultior and stultissimus, the forms luscior and luscissimus are not used with luscus, and similarly with many words of this class. To which I say that this happens for the reason that by nature no one is more one-eyed than a one-eyed man, whereas he may seem to become more stupid.

73. To their question why we do not say mane 'in the morning,' comparative manius, superlative manissime, with a similar question about vesperi 'in the evening,' I reply that in matters of time there is properly no 'more' and 'less,' but there can be before and after. Therefore the first hour is earlier than the second, but not 'more hour.' But nevertheless to rise magis mane 'more in the morning' is an expression in use; he who rises in the first part of the morning rises magis mane 'more in the morning' than he who does not rise in that first part. For as the day cannot be said to be more than day, so mane cannot be said to be more than mane. Therefore that very magis 'more' which is commonly said is not consistent with itself, because magis mane means the first part of the mane, and magis vespere the last part of the evening.

74. Similarly, Regularity is found fault with on account of unlikenesses of this sort, that although anus 'old woman' and cadus 'cask' are like words, and from anus there are the diminutives anicula and anicilla, the other two are not formed from cadus, nor from piscina 'fish-pond' are piscinula and piscinilla made. To this I answer that words of this kind have the Regularities, as I have said, only when the size must be noted in each separate stage, and this is in common use, as is cista 'box,' cistula, cistella, and canis 'dog,' catulus 'puppy,' catellus 'little puppy'; this is not indicated in the usage connected with flocks. Therefore the usage is more often that things be divided into two

sets, as larger and smaller, like *lectus* 'couch' and *lectulus*, *arca* 'strong-box' and *arcula*, and other such words.

75. As to their saying that some words lack the nominative and others lack the oblique cases, and that therefore the Regularities do not exist, this is an error. For they say that the nominative is lacking in such words as *frugis* *frugi* *frugem* 'fruit of the earth' and *colem* *colis* *cole* 'plantstalk,' and the oblique cases are lacking in such as *Diespiter* 'Jupiter,' *dat. Diespitri*, *acc. Diespitrem*, and *Maspiter* 'Mars,' *Maspitri*, *Maspitrem*.

76. To this I answer that the former have nominatives and the latter have oblique case-forms. For the nominative of *frugi* is by nature *frux*, but by usage we say *frugis*, like *avis* 'bird' and *ovis* 'sheep'; so also, the nominative of the other word is by nature *cols* and by usage *colis*. Both of these agree with the principle of Regularity, because it is perfectly clear of what sort that form ought to be which is not in use, and in that which is now in use in the nominative there is the same kind of Regularity as most words have that are hard to pronounce when they pass from the plural to the singular. So when the passage was made from the spoken plural *oves*, the form which was pronounced was not *ovs* without *I*, but an *I* was added and the word became ambiguous as to whether the case was nominative or genitive. Like the nominative *ovis* is also the nominative *avis*.

77. Thus I do not see why they say that in the oblique cases *Diespitri* and *Diespitrem* are lacking, except because they are less common in use than *Diespiter*. But the argument amounts to nothing; for the case-form which is uncommon is just as much a case-form as that which is common. But let us grant that in the list of case-forms some words lack the nominative and others lack some one of the oblique cases; for this charge will not for that reason be able in any way to destroy the existence of a logical relationship among the forms.

78. For as some statues lack the head or some other part without destroying the Regularities in their other limbs, so in words certain losses of cases can take place, with as little result. Besides, what is lacking can be remade and put back into its place, where nature and usage permit; which we sometimes find done by the poets, as in this verse of *Naevius*, in the *Clastidium*:

With life unburied, glad, to fatherland restored.

79. Likewise they find fault with the nominatives *strues* 'heap,' *Hercules*, *homo* 'man'; for if Regularity actually existed, they say, these forms should have been *strus*, *Hercul*, *homen*. These nouns do not show that Regularity is non-existent, but that the oblique cases do not have a head or starting-point according to their type of Regularity. Is it not a fact that, if you should put a head of Philip on a statue of Alexander and the limbs should be proportionately symmetrical, then the head which does correspond to the statue of Alexander's limbs would likewise be symmetrical? And it is not a fact that if one should in practice sew together a tunic in such a way that one breadth of the cloth has narrow border-stripes and the other has broad stripes,

each part lacks regular conformity within its own class.

80. Likewise they say that the Regularities do not exist, because some say cupressus 'cypress-trees' in the plural and others say cupressi, and similarly with fig-trees, plane-trees, and most other trees, to which some give the ending US and others give EI. This is wrong; for the tree-names ought to be spoken with E and I, fici like nummi 'sesterces,' because the ablative is ficiis like nummis, and the genitive is ficorum like nummorum. If the plural were ficus, then it would be like manus 'hand'; we should say ablative ficibus like manibus, and genitive ficuum like manuum, and we should not say accusative ficos, but ficus, just as we do not say accusative manos but manus; nor would usage speak the oblique cases of the singular genitive fici and ablative fico, just as it does not say genitive mani but manus, nor ablative mano but manu.

81. Moreover, they think that there is proof of the non-existence of Regularity, in the fact that Lucilius writes:

Priced a ten-as, or else we may say at ten-asses.

They are in error, because Lucilius should not have been uncertain as to the form, since both are right. For in copper money, from the as to the hundred-as, the number adds to itself the meaning of the copper coin, and all its case-forms are limited by its numerical value, starting from the dupondius 'two-as piece,' which is used by many in two ways, masculine dupondius and neuter dupondium, like gladius and gladium. From tressis 'three-as' there is a masculine plural, tresses in the nominative and tressibus in the ablative, as in "I trust in these three asses," singular tressis as in "I have this three-as" and "I trust in this three-as." The same usage is followed all the way to centussis 'hundred-as.' From here on, the numeral does not denote money any more than other things.

82. The numerals which do not signify money, from quattuor 'four' to centum 'hundred,' have forms of triple function, because quattuor is masculine, feminine, and neuter. When mille 'thousand' is reached, it takes on a fourth function, that of a singular neuter, because the expression in use is mille 'thousand' of denarii, from which is made a plural, milia 'thousands' of denarii.

83. Since therefore so far as concerns the Regularities it is not essential that all words that are spoken should be alike in their systems, but only that they should be inflected alike each in its own class, those persons are stupid who ask why as and dupondius and tressis are not spoken according to a regular scheme; for the as is a single unit, the dupondius is a compound term indicating that it pendebat 'weighed' duo 'two' asses, and the tressis is so called because it is composed of tres 'three' units of aes 'copper.' Instead of asses, the ancients used sometimes to say aes; a usage which survives when we hold an as in the hand and say "with this aes 'copper piece' and aenea libra 'pound of copper,'" and also in the legal formula "to have bequeathed a thousand (asses) of aes 'copper.'"

84. Therefore, because the numerals from tressis to centussis are

compounded of parts of the same kind, they have a likeness of the same kind; but the word *dupondius*, because it is different in formation, has a different system of declension, as it should have. So also the *as*, because it is a single unit and is the beginning, means one and has its own indefinite plural, for we say *asses*; but when we limit them numerically, we say *dupondius* and *tressis* and so on.

85. Thus it seems to me that since the definite and the indefinite have an inherent difference, the two ought not to be spoken in the same fashion, the more so because in the words themselves, when they are attached to a definite number in the thousands, a form is used which is not the same as that used in other expressions. For they speak thus: *mille denarium* ‘thousand of *denarii*,’ not *denariorum*, and two *milia denarium* ‘thousands of *denarii*,’ not *denariorum*. If it were *denarii* in the nominative and it denoted an indefinite quantity, then it ought to be *denariorum* in the genitive; and the same distinction must be preserved, it seems to me, not only in *denarii*, *victoriati*, *drachmae*, and *nummi*, but also in *viri*, when we say that there has been a decision of the *triumvirs*, the *decemvirs*, the *centumvirs*, all of which have the genitive *virum* and not *virorum*.

86. The old numbers have their Regularities, because they all have one rule, two acts, three grades, and six decades, all of which show regular internal correspondences. The rule is the number nine, because, when we have gone from one to nine, we return again to one and nine; hence both ninety and nine hundred are of that one and the same nine-containing nature. So there are numbers of eight-containing nature, and going downwards they arrive at those which are merely ones.

87. The first act is from one to nine hundred, the second from one thousand to nine hundred thousand. Because one and thousand are alike unities, both are called by a name in the singular; for as we say ‘this one’ and ‘these two,’ so we say ‘this thousand’ and ‘these two thousands,’ and after that all the other numbers in the two acts are likewise plural. The unitary grade is found in both acts, from one to nine; the denary grade extends from ten to ninety; the centenary grade from hundred to nine hundred. Thus from the three grades, six decades are made, three in the thousands, and three in the smaller numbers. The ancients were satisfied with these numerals.

88. To these, their descendants added a third and a fourth act, imposing names which started from *deciens* ‘million’ and *deciens miliens* ‘thousand million’; and though the names were not formed by logical relation with the lower numerals, still their formation is not in conflict with the Regularity about which we are writing. For inasmuch as *deciens* is used as a neuter singular like *mille*, so that both words are without change of form for the various cases, we shall use *deciens* unchanged as nominative and as genitive, even as we do *mille*; and none the less shall we set before *mille* the signs of nominative and of genitive plural, because *mille* is also in the other number — and so also shall we speak of ‘these *deciens*’ in the same cases.

89. When a noun is the same in the nominative though it has more than one meaning, in which instance they call it a homonymy, Regularity does not prevent the oblique cases from the same starting form in which the homonymy is, from being dissimilar. Therefore we say Argus in the masculine, when we mean the man, but when we mean the town we say, in Greek or in the Greek fashion, Argos in the neuter, though in Latin it is Argi, masculine plural. Likewise, if the same word denotes both a noun and a verb, we shall cause it to be inflected both for cases and for tenses, with different inflection for noun and verb, so that from Meto as a noun, a man's name, we form gen. Metonis, acc. Metonem, but from meto as a verb, 'I reap,' we form the future metam and the imperfect metebam.

90. They find fault when from the same utterance two or more word-forms are derived, which they call synonymms, such as Alcmaeus and Alcmaeo, and also Geryon, Geryoneus, Geryones. As to the fact that in this class certain speakers interchange the case-forms wrongly — they are not finding fault with Regularity, but with the speakers who use those case-forms unskillfully: each speaker ought to follow, in his inflection, the case-forms which attend upon the nominative which he has taken as his start, and he ought not to make a dative Alcmaeoni and an accusative Alcmaeonem when he has said Alcmaeus in the nominative; if he has mixed his declensions and has not followed the Regularities, blame must be laid upon him.

91. They find fault with Aristarchus for saying that the names Melicertes and Philomedes are not alike, because one has as its vocative Melicerta, and the other has Philomedes; and likewise with those who say that lepus 'hare' and lupus 'wolf' are not alike, because the vocative case of one is lupe and of the other is lepus, and with those who say the same of socer 'father-in-law' and macer 'lean,' because in the declensional change there comes from the one the three-syllabled genitive soceri and from the other the two-syllabled genitive macri.

92. Although the answer to this was given above when I spoke about the kinds of wool, I shall make here some further statements: the likenesses of spoken words rest not only upon their form, but also upon some attached strength and power which is usually hidden from our eyes and ears. Therefore we often say that two apples that are identical in appearance are not alike, if they are of different flavour; and we say that some horses of the same appearance are not alike, if by breed they are different on the sire's side.

93. Therefore in buying human beings as slaves, we pay a higher price for one that is better by nationality. And in all these matters we take the points of likeness not merely from the appearance, but also from other factors, as in horses their age, in asses the kind of colts that they beget, in fruits the flavour of their juice. If therefore one proceeds in the same way in deciding whether words are alike, he is not to be found fault with.

94. Wherefore as the pronoun is sometimes taken as an aid to distinguish the resemblances, so we take some case-form, as in nemus 'grove' and lepus

‘hare,’ *lepus* being shown by it to be masculine and *nemus* neuter: therefore they go in different directions and the plurals are *leporēs* and *nemora*. So also, if anything else whatsoever is taken from outside to enable a thorough examination of the problem of likeness to be made, it will not be too far from the natural qualities: for you cannot even see whether two magnetic stones are alike or not, unless you have brought close to them from outside a particle of steel, which like magnets attract to a like degree, and magnets different in strength attract with different powers.

95. That which concerns the Regularity of nouns has, I think been so cleared up that material for answering all objections can be drawn from these sources.

We now come to the logical system of verbs; this has four parts: tenses, persons, kinds, and divisions. As they find fault with respect to each and every part, I shall make answer to the objections one by one.

96. First as to their saying that the Regularities are not preserved in the tenses, when they give perfect *legi* ‘I have read,’ present *lego* ‘I read,’ future *legam* ‘I shall read,’ and others in just the same way: they are wrong in finding fault with those forms like *legi* as denoting completed actions and the other two, *lego* and *legam*, as denoting action only begun; for the same verb which has been taken from the same kind and the same division, can be paraded through the tenses of non-completion, like *discebam* ‘I was learning,’ *disco* ‘I learn,’ *discam* ‘I shall learn,’ and the same of completion, thus *didiceram* ‘I had learned,’ *didici* ‘I have learned,’ *didicero* ‘I shall have learned.’

From this one may know that the logical system of verbs is consistent with itself, but that those who try to speak the verbs in their three tenses, do this in an ignorant way; 97. that likewise those do so ignorantly who find fault because we say *amor* ‘I am loved,’ *amabor* ‘I shall be loved,’ *amatus sum* ‘I have been loved’; for, they say, in one and the same series there ought not to be one verb made up of two words while the other two verbs are each of one word. Yet if you would put down verb-forms from a division of one kind, they would not differ from one another; for all the forms denoting incomplete action are alike single, and the forms of completed action are in all verbs double, quite like one another: such as *amabar*, *amor*, *amabor*, and *amatus eram*, *amatus sum*, *amatus ero*.

98. Wherefore likewise they do ill to cite *ferio* ‘I strike,’ future *feriam*, perfect *percussi*; because the proper order is *ferio*, *feriam*, *feriebam*, and *percussi*, *percussero*, *percusseram*. And in this fashion answer can be made to the one who finds fault in the matter of the other tenses.

99. They make a similar mistake who say that all verbs ought to change the radical syllables in both divisions, or no verb should — as in *pungo* ‘I prick,’ future *pungam*, perfect *pupugi*, and *tundo* ‘I pound,’ *tundam*, *tutudi*; for they are comparing unlikes, namely verbs of the incomplete phase with the completed. But if they were comparing only the incomplete, then all the stems

of the verb would be seen to be unchangeable, as in *pungebam*, *pungo*, *pungam*, and on the other hand changeable, if they instanced the completed, as in *pupugeram*, *pupugi*, *pupugero*.

100. Likewise they do ill to compare *fui* 'I was,' *sum* 'I am,' *ero* 'I shall be'; for *fui* is a form of completed time, whose series is consistent with itself in all its parts, as it should be, namely *fueram*, *fui*, *fuero*. Of the incomplete, that which is now pronounced *sum* used to be spoken *esum*, and the series is consistent in all its persons, because they used to say present *esum es est*, imperfect *eram eras erat*, future *ero eris erit*. In this same fashion you will see that the other verbs of this kind preserve the principle of Regularity.

101. Besides, they find fault with Regularity in this matter, that certain verbs have not the three persons, nor the three tenses; but it is with lack of insight that they find this fault, as if one should blame Nature because she has not shaped all living creatures after the same mould. For if by nature not all forms of the verbs have three tenses and three persons, then the divisions of the verbs do not all have this same number. Therefore when we give a command, a form which only the verbs of uncompleted time have — when we give a command to a person present or not actually present, three verb-forms are made, like *lege* 'read (thou),' *legito* 'read (thou)' or 'let him read,' *legat* 'let him read': for nobody gives a command with a form denoting action already completed. On the other hand, in the forms which denote declaration, like *lego* 'I read,' *legis* 'thou readest,' *legit* 'he reads,' there are nine verb-forms of uncompleted action and nine of completed action.

102. For this and similar reasons the question that should be asked is not whether one kind disagrees with another kind, but whether there is anything lacking in each kind. If to these there is added what I said above about nouns, all difficulties will be easily resolved. For as the nominative case-form is in them the source for the derivative cases, so in verbs the source for other forms is in the form which expresses the person of the speaker and the present tense: like *scribo* 'I write,' *lego* 'I read.'

103. Wherefore, if it has happened in verbs as it does happen in nouns, that in the pattern the starting-point is lacking or belongs to a different kind, we give the same arguments here which we gave there, with suitable changes in application, as to why and how Regularity is none the less preserved. And as in nouns the word will have its own peculiar starting-point and in the oblique cases there will be a change to some other pattern, on the assumption of which it can be more easily seen from what the word-forms are derived (for it happens that the nominative case-form is sometimes ambiguous), so it is in verbs, as in this verb *volo*, because it has two meanings, one from wishing and the other from flying; therefore from *volo* we appreciate that there are both *volare* 'to fly' and *velle* 'to wish.'

104. Certain critics find fault, because we say *pluit* 'rains' and *luit* 'looses' both in the past tense and in the present, although the Regularities ought to make a distinction between the verb-forms of the two tenses. But they are

mistaken; for it is otherwise than they think, because in the past tense we say *pluit* and *luit* with a long U, and in the present with a short U; and therefore in the law about the sale of farms we say *ruta caesa* ‘things dug up and things cut,’ with a lengthened u.

105. Likewise certain persons find fault, because they think that active *sacrifico* ‘I sacrifice’ and passive *sacrificor*, active *lavat* ‘he bathes’ and passive *lavatur*, are the same: but whether this is so or not, has no effect on the principle of Regularity, provided that he who says *sacrifico* sticks to the future *sacrificabo* and so on in the active, through the whole paradigm, avoiding the passive *sacrificatur* and *sacrificatus sum*: for these two sets do not harmonize with each other.

106. In Plautus, when he says:

The fish, I really think, that bathe through all their life, Are in the bath less time than this Phronesium, *lavari* ‘are in the bath,’ with final I instead of E, does not attach to *lavant* ‘bathe’: Regularity refers *lavari* to *lavantur*, and whether the error belongs to Plautus or to the copyist, it is not Regularity, but the writer that is to be blamed. At any rate, *lavat* and *lavatur* are used with a difference of meaning in certain matters, because a nurse *lavat* ‘bathes’ a child, the child *lavatur* ‘is bathed’ by the nurse, and in the bathing establishments we both *lavamus* ‘bathe’ and *lavamur* ‘are bathed.’

107. But since usage approves both, in the case of the whole body one uses rather *lavamur* ‘we bathe ourselves,’ and in the case of portions of the body *lavamus* ‘we wash,’ in that we say *lavo* ‘I wash’ my hands, my feet, and so on. Therefore with reference to the bathing establishments they are wrong in saying *lavi* ‘I have bathed,’ but right in saying *lavi* ‘I have washed’ my hands. But since in the bathing establishments *lavor* ‘I bathe’ and *lautus sum* ‘I have bathed,’ it follows that on the other hand from *soleo* ‘I am wont,’ which is in the active, one ought to say *solui* ‘I have been wont,’ as Cato and Ennius write, and that *solitus sum*, as the people in general say, ought not to be used. But as I have said above, Regularity exists none the less for these few inconsistencies which occur in speech.

108. Likewise, they present as an argument against the existence of Regularity the fact that like forms are not derived from likes, as from *dolo* ‘I chop’ and *colo* ‘I till’; for one forms the perfect *dolavi* and the other forms *colui*. In such instances something additional is wont to be taken to aid in the making of the other forms, just as we do in the tiny art-works of Myrmecides: therefore in verbs, since the likeness is often so confusing that the distinction cannot be made unless you pass to another person or tense, you become aware that the words before you are not alike when passage is made to the second person, which is *dolas* in the one verb and *colis* in the other.

109. Thus in the rest of the paradigm of the verbs each follows its own special type. Whether in the second person the paradigm of verbs has in the final syllable AS or ES or ĪS or ĪS, is of importance for distinguishing the likenesses. Wherefore the mark of Regularity is in the second person rather

than in the first, because in the first the unlikeness is concealed, as appears in meo 'I go,' neo 'I sew,' ruo 'I fall'; for from these there develop unlike forms by the change from first to second person, because they are spoken thus: meo meas, neo nes, ruo ruis, each one of which preserves its own type of likeness.

110. Likewise, many find fault with Regularity in connexion with the so-called participles; wrongly: for it should not be said that the set of three participles comes from each individual verb, like amaturus 'about to love,' amans 'loving,' amatus 'loved,' because amans and amaturus are from the active amo, and amatus is from the passive amor. But that which Regularity can offer, which the participles have, each in its own class, is case-forms, as amatus, dative amato, and plural amati, dative amatis; and so in the feminine, amata and plural amatae. Likewise amaturus has a declension of the same kind. Amans has a somewhat different declension; because all words of this kind have a regular likeness in their own class, amans, like others of its class, uses the same forms for masculine and for feminine.

111. About the last argument in the preceding book, that Regularity does not exist for the reason that those who have written about it do not agree with one another, or else the points on which they agree are at variance with the words of actual usage, both reasons are of little weight. For in this fashion you will have to reject all the arts, because in medicine and in music and in many other arts the writers do not agree; you must take the same attitude in the matters in which they agree in their writings, if none the less nature rejects their conclusions. For in this way, as is often said, it is not the art but the artist that is to be found fault with, who, it must be said, has in his writing failed to see the correct view; we should not for this reason say that the correct view cannot be formulated in writing.

112. As to the man who uses as ablatives monti 'hill' and fonti 'spring' while others say monte and fonte, along with other words which are used in two forms, one form is correct and the other is wrong, yet the person who errs is not destroying the Regularities, but the one who speaks correctly is strengthening it; and as he who errs in these words where they are used in two forms is not destroying logical system when he follows the wrong form, so even in those words which are not spoken in two ways, a person who thinks they ought to be spoken otherwise than they ought, is not destroying the science of speech, but exposing his own lack of knowledge.

113. The considerations by which we might think that the arguments could be refuted which were presented against Regularity in the preceding book, I have touched upon briefly, as best I could. Even if by their arguments they had achieved what they wish, namely that in the Latin language there should be Anomaly, still they would have accomplished nothing, for the reason that in all parts of the world both natures are present: because some things are like, and others are unlike, just as in animals there are unlikes such as horse, ox, sheep, man, and others, and yet in each kind there are countless individuals that are like one another. In the same way, among fishes, the moray is unlike

the sea-bass, the sea-bass is unlike the sole, and this is unlike the moray and the codfish, and others also; though the number of those resemblances is still greater, which exist separately among morays, among hakes, and in other kinds of fish, class by class.

114. Now although in the derivations of words a great number develop from unlike words, still the number of those in which likenesses are found is even greater, and therefore it must be admitted that the Regularities do exist. And likewise, since general usage permits us to follow the principle of Regularity in almost all words, it must be admitted that we ought as a body to follow Regularity in every way, and individually also except in words the general use of which will give offence; because, as I have said, the people ought to follow one standard, the individual persons ought to follow another.

115. And this is not astonishing, since not all individuals have the same privileges and rights; for the poet can follow the Regularities more freely than can the orator. Therefore, since this book has completed the exposition of what it promised to set forth, I shall bring it to a close; and then in the next book I shall write about the form of inflected words.

BOOK X

1. Many have raised the question whether in the inflections of words the art of speaking ought to follow the principle of unlikeness or that of likeness. This is important, since from these develop the two systems of relationship: that which develops from likeness is called Regularity, and its counterpart is called Anomaly. Of this, in the first book, I gave the arguments which are advanced in favour of considering unlikeness as the proper guide; in the second, those advanced to show that it is proper rather to prefer likeness. Therefore, as their foundations have not been laid by anyone, as should have been done, nor have their order and nature been set forth as the matter demands, I shall myself sketch an outline of the subject.

2. I shall speak of four factors which limit the inflections of words: what likeness and unlikeness are; what the relationship is which they call *logos*; what “by comparative likeness” is, which they call “according to *logos*”; what usage is. The explanation of these matters will make clear the problems connected with Regularity and Anomaly: whence they come, what they are, of what sort they are.

3. The first topic to be discussed must be likeness and unlikeness, because this matter is the foundation of all inflections and set limits to the relationship of words. That is like which is seen to have several features identical with those of that which is like it, in each case: that is unlike, which is seen to be the opposite of what has just been said. Every like or unlike consists of two units at least, because nothing can be like without being like something else, and nothing can be unlike without association with something to which it is unlike.

4. Thus a human being is said to be like a human being, and a horse to be like a horse, and a human being to be unlike a horse; for a human being is like a human being because they have limbs of the same shape, which separate human beings from the category of the other animals. Among human beings themselves, for a like reason a man is more like a man than a man is like a woman, because men have more physical parts the same; and so an elderly man is more like an old man than he is like a boy. Further, they are more like who are of almost the same features, the same bearing of person, the same shape of body; therefore those who have more points of identity, are said to be more like; and those who come nearest to having them all alike, are called most like, as it were, twins.

5. There are those who think that things have three natures, like, unlike, and neutral, which last they sometimes call the not like, and sometimes the not unlike; but although there are the three, like, unlike, neutral, there can also be a division into two parts only, in such a way that whatever you compare with something else either is like or is not. They think that a thing is like and is unlike if it is seen to be of such a kind as I have described, and neutral, if it

does not have greater weight on one side than on the other; as if the two things which are being compared have twenty parts each, and among these should have ten to be noted as identical and ten likewise to be noted as different, in respect to likeness and unlikeness. This nature most scholars include under the name of unlikeness.

6. Therefore since it happens that the question in dispute seems rather to be about the name than about the thing, attention must rather be directed, when something is said to be like, to the problem to what part it is said to be like; for it is in this that any mistake ordinarily rests. This must be noted, I say, because it can happen that a man may not be like another man even though he has many parts like the other's, and can be said therefore to have like eyes, hands, feet, and other physical features in considerable number, separately and taken together, like the other man's.

7. Therefore because careful watch must be kept in words to see what parts those words which are said to show likeness ought to have alike, and in what ways, the inquirer is on this topic especially likely to slip into error, as will appear below. For to the careless person what can seem more alike than the two words *suis* and *suis*? But they are not alike, because one is from *suere* 'to sew' and means 'thou sewest,' and the other is from *sus* and means 'of a swine.' Therefore we admit that they are alike as spoken words and in their separate syllables, but we see that they are unlike in their parts of speech, because one has tenses and the other has cases; and tenses and cases are the two features which in the highest degree serve to distinguish the different systems of Regularity.

8. Likewise, words that are even nearer alike in kind often cause a similar mistake, as in the fact that *nemus* 'grove' and *lepus* 'hare' seem to be alike since both have the same nominative; but it is not an instance of likeness, because they stand in need of certain factors of likeness, among which is that they should be in the same noun-gender. But these two words are not, for *lepus* is masculine and *nemus* is neuter; for we say *hic* 'this' with *lepus* and *hoc* with *nemus*. If they were of the same gender, the same form would be set before both, and we should say either *hic lepus* and *hic nemus*, or *hoc nemus* and *hoc lepus*.

9. Therefore he who asks whether the inflections of words stand in a regular relation, must examine to see what kinds of likenesses there are and of what sort they are, which pertain to this matter. And just because this topic is difficult, those who have written of these subjects either have avoided it or have begun it without being able to complete their treatment of it.

10. Therefore in this there is seen a lack of agreement, and not merely of one kind. For some have fixed the number of all the distinctions as a whole, as did Dionysius of Sidon, who wrote that there were seventy-one of them; and others set the number of those distinctions which apply to the words which have cases: the same writer says that of these there are forty-seven, Aristocles reduced them to fourteen headings, Parmeniscus to eight, and others made the

number smaller or larger.

11. If the origin of these likenesses had been correctly grasped and their logical explanation had proceeded from that as a beginning, there would be less error in regard to the inflections of words. Of these likenesses there are, I think, first principles of two kinds only, by which the likenesses ought to be tested; of which one lies in the substance of the words, the other lies, so to speak, in the form of that substance, which comes from inflection.

12. For there must be one, that the word be like the word from which it is inflected, and two, that in comparison from word to word the inflectional form with which the comparison is made should be of the same kind. For sometimes there are like forms reached by inflection from like words, such as datives *ero* and *fero* from *erus* 'master' and *ferus* 'wild,' and sometimes unlike forms, such as genitive *eri* and accusative *forum*, from *erus* and *ferus*. When both principles are fulfilled and word is like word and inflectional form like inflectional form, then and not before will I pronounce that the word is like, and has a twofold and perfect likeness to the other — which is what Regularity demands.

13. But I wish to avoid the appearance of trickiness in having declared that there are only two kinds of likenesses when both have a number of sub-forms — if I say nothing about these, you may think that I am intentionally leaving myself a place of refuge; I shall therefore go back and start from the origin of the likenesses which must be followed or avoided in the comparison of words and in their inflections.

14. The first division in speech is that some words are not changed into any other form whatsoever, like *vix* 'hardly' and *mox* 'soon,' and others are inflected, like genitive *limae* from *lima* 'file,' imperfect *ferebam* from *fero* 'I bear'; and since Regularity cannot be present except in words which are inflected, he who says that *mox* and *nox* 'night' are alike, is mistaken, because the two words are not of the same kind, since *nox* must come under the system of case-forms, but *mox* must not and cannot.

15. The second division is that, of the words which can be changed by derivation and inflection, some are changed in accordance with will, and others in accordance with nature. I call it will, when from a name a person sets a name on something else, as *Romulus* gave a name to *Roma*; I call it nature, when we all accept a name but do not ask of the one who set it how he wishes it to be inflected, but ourselves inflect it, as genitive *Romae*, accusative *Romam*, ablative *Roma*. Of these two parts, voluntary derivation goes back to usage, and natural goes back to logical system.

16. For this reason we ought not to compare *Romanus* 'Roman' and *Capuanus* 'Capuan' as alike, and to say that *Capuanus* ought to be said from *Capua* just as *Romanus* is from *Roma*; for in such there is in actual usage an extreme fluctuation, since those who derive the words set the names on the things with utter lack of skill, and when usage has accepted the words from them, it must of necessity speak confused names variously derived. Therefore

neither the followers of Aristarchus nor any others have undertaken to defend the cause of voluntary derivation as among the Regularities; but, as I have said, this kind of derivation of words in common usage is an ill thing, because it springs from the people, which is without uniformity and without skill. Therefore, in speaking, there is in this kind of derivation rather Anomaly than Regularity, 17. There is a third division, the words which are by their nature inflected. These are divided into four subdivisions: one which has cases but not tenses, like *docilis* ‘docile’ and *facilis* ‘easy’; a second, which has tenses but not cases, like *docet* ‘teaches,’ *facit* ‘makes’; a third which has both, like *docens* ‘teaching,’ *faciens* ‘making’; a fourth which has neither, like *docte* ‘learnedly’ and *facete* ‘wittily.’ The individual parts of this division are each unlike the three remaining parts. Therefore, unless the words are compared with one another in their own subdivision, even if they do agree the one word will not be so like the other that it ought to make the same inflectional scheme.

18. Since there are several species in each part, I shall speak of them one by one. The first subdivision, characterized by the possession of cases, is divided into two parts, namely into nouns and articles, which latter class is both definite and indefinite, as for example *hic* ‘this’ and *quis* ‘who.’ Whichever of these two kinds you have taken, it must not be compared with the other, because they belong to schemes of Regularity which are different from each other.

19. In the articles, Regularity is hardly even a shadow, and more a Regularity of things than of spoken words; in nouns, it comes out better, and consummates itself rather in the spoken words and the likeness of the syllables than in the things named. There is also the additional fact that it is difficult to show that Regularities reside in the articles, because they are single words; but in nouns it is easy, because there is a great abundance of like name-words. Therefore it is not so much a matter of dividing this part from that other part, as of seeing to it that the investigator should be too much ashamed even to call that other part into the same arena to do battle.

20. As there are two groups in the articles, the definite and the indefinite, so there are in the nouns, the common nouns and the proper names; for *oppidum* ‘town’ and *Roma* ‘Rome’ are not the same, since *oppidum* is a common noun, and *Roma* is a proper name. In their account of the systems, some make this distinction, and others do not; but we shall enter in our account, at the proper place, what this difference is and why it has come to be.

21. That noun may be like noun, it ought to have the qualities of being of the same gender, of the same kind, also in the same case and with the same ending: kind, that if it is a proper name which you are comparing, it be a proper name with which you compare it; gender, that not merely one, but both words be masculine; case, that if one is in the dative, the other likewise be in the dative; ending, that whatever last letters the one has, the other also have the same.

22. To this fourfold spring two sets of lines are drawn up, the ones crosswise and the others vertical, as is the regular arrangement on a board on which they play with movable pieces. Those are crosswise which are the oblique cases formed from a nominative, like *albus* 'white,' genitive *albi*, dative *albo*; those are vertical which are inflected from one nominative to other nominatives, as masculine *albus*, feminine *alba*, neuter *album*. Both sets of lines are of six members. Each member of the crosswise lines is called a case; each member of the vertical lines is a gender; that which belongs to both in their crossed arrangement, is a form.

23. I shall speak first of the crosswise lines. Scholars have given various sets of names to the cases; we shall call that case which is spoken for the purpose of naming, the case of naming or nominative...

here three leaves are lacking in the model copy 24.... To indicate one 'broom' the plural *scopae* is used, not the singular *scopa*. For they are different by nature, because the names first mentioned are set upon simple objects, and those mentioned later apply to compounded objects; thus *bigae* 'two-horse team' and *quadrigae* 'four-horse team' are employed in the plural because they denote a union of objects. Therefore we do not say one *biga*, like one *lata* 'broad' and *alba* 'white,' but one *bigae*, with the numeral also in the plural; nor do we say *duae* 'two' with reference to *bigae* and *quadrigae*, as we say *duae* 'two' with application to the plural forms *latae* and *albae*, but we say *binae* 'two sets' of *bigae* and *quadrigae*.

25. Likewise the character of the form of a word is important, because in the form of the spoken word a change is sometimes made in the first part of the word, as in *sūt* 'sews' and *sūt* 'sewed'; sometimes in the middle, as in *curso* 'I run to and fro,' and *cursito*, of the same meaning; sometimes at the end, as in *doceo* 'I teach' and *docui* 'I have taught'; sometimes the change is common to two parts, as in *lĕgo* 'I read,' *lĕgi* 'I have read.' It is important therefore to observe of what letters each word consists; and the last letter is especially important, because it is changed in the greatest number of instances.

26. Because of this, since the likenesses in these parts also are wont to be used in the comparison of case-forms, and this is done ill by some and well by others, we must see whether this has been done rightly or wrongly. Yet wherever the letters are altered, not only the altered letters must be noted, but also those which are next to them and are not affected; for this proximity has considerable influence in the inflections of words.

27. Among these forms we shall not call those words like which denote like things, but those which are of such a stamp that such forms are in most instances wont by custom to denote like things, as by a man's tunic or a woman's tunic we mean not a tunic that a man or a woman is wearing, but one which by custom a man or a woman ought to wear. For a man can wear a woman's tunic, and a woman can wear a man's, as we see done on the stage by actors; but we say that that is a woman's tunic, which is of the kind that

women customarily use to dress themselves in. As an actor may wear a woman's dress, so Perpenna and Caecina and Spurinna are said to have names that are feminine in form; they are not said to have women's names.

28. The likeness of the inflection also must be watched, because the way which some words take is clear from the very words from which their inflection starts, as how it is proper to use praetor and consul, dative praetori and consuli. Others are properly appreciated only as a result of the change seen in the inflections, as in socer 'father-in-law' and macer 'lean,' because the one becomes socerum in the accusative, and the other macrum; after making this change, each of them follows its own way in the remaining forms, both in the inflections of the singular and in those of the plural. This method is employed because in the inflections there are two kinds of natures which can be compared with each other, one which can be seen in the word itself, such as homo 'man' and equus 'horse,' but the second cannot be seen through without bringing in something from outside, as in eques 'horseman' and equiso 'stable-boy' — for both are derived from equus 'horse.'

29. By this method, you will, on making a comparison, know that of men observed in person one is or is not like the other; but you could not say that the two are in like fashion taller than their brothers, if you should not know how tall those shorter brothers are with whom they are compared. In this way the likenesses of things broader and higher, and others of the same kind, cannot be examined without bringing in some help from outside. So therefore, inasmuch as certain case-forms are of this kind, it is not easy to say that they are like, if you observe the spoken words in one case only; to make a correct judgement, you will have to bring in another case-form to which the spoken word passes as it is inflected.

30. These considerations are what I have thought enough to touch upon, for observing the likenesses of nouns. It remains to speak of the articles, of which some are like nouns and others are different. For of the five classes the first two have the same properties, because they have forms for masculine, feminine, and neuter, they have some forms to denote the singular and others to denote the plural, and they have five cases; the vocative is not indicated by a separate spoken form. They have this of their own, that some are definite, like hic 'this,' feminine haec, and others are indefinite, like quis 'which,' feminine quae. But since their system of Regularity is shadowy and thin, it is not necessary to speak further of it in this book.

31. The second subdivision consists of those words which have tenses but not cases, and have persons. The categories of their inflections are six: one which is that of the tenses, as legebam 'I was reading,' gemebam 'I was groaning,' lego 'I read,' gemo 'I groan'; the second is that of the persons, as sero 'I sow,' meto 'I reap,' seris 'thou sowest,' metis 'thou reapest'; the third is the interrogative, as scribone 'do I write?', legone 'do I read?', scribisne, legisne; the fourth is that of the answer, as fingo 'I form,' pingo 'I paint,' fingis, pingis; the fifth that of the wish, as dicerem 'would I were saying,'

facierem 'would I were making,' dicam 'may I say,' faciam 'may I make'; the sixth that of the command, as cape 'take,' rape 'seize,' capito, rapito.

32. Likewise there are four categories of inflections which have tenses without persons: in the interrogative, as foditurne 'is digging going on?' seriturne 'is sowing going on?' and fodieturne 'will digging be done?', sereturne 'will sowing be done?'; of the category for the answer the same forms are used, but without the last syllable ne; the category for the wish, as vivatur 'may there be living,' ametur 'may there be loving,' viveretur 'would there were living,' amaretur 'would there were loving.' Whether the inflections for the impersonal command exist, is somewhat doubtful; there is also doubt about the scheme of the forms, which is given as paretur 'let there be preparation,' pugnetur 'let there be righting,' or parator, pugnator.

33. There are added to these categories those which proceed from the four sets of pairs consisting of the divisions: from that of the incomplete and the completed, as emo 'I buy' and edo 'I eat,' emi 'I have bought' and edi 'I have eaten'; from that of the act done once and the act done more often, as scribo 'I write' and lego 'I read,' scriptito 'I am busy with writing,' and lectito 'I read and reread'; from that of active and passive, as uro 'I burn' and ungo 'I anoint,' uror 'I am burned' and ungor 'I am anointed'; from that of singular and plural, as laudo 'I praise' and culpo 'I blame,' laudamus 'we praise' and culpamus 'we blame.' With regard to the words of this class whose categories I have described, the matter of how full an equipment of forms each has, and what sort of forms it makes, will be set forth with more attention to detail in the books which are to be on the paradigms of verbs.

34. The words of the third subdivision, which are inflected with tenses and cases and are by many therefore called participials, are of this kind...

here three leaves are lacking in the model copy 35.... When we meet a new word, we ask about its case-forms, as to how we shall inflect them; and yet if some poet has made up some word and has himself formed from it some case-form in an incorrect way, we blame him rather than follow his example. Therefore Ratio or Relation, of which I am speaking, is present in both: in the words which are imposed upon things, and in those which are formed by inflection; and then also there is that third kind of Relation, which combines the characteristics of the two.

36. Among these, each and every relation, when compared with another, is either like or unlike; and often the words are different but the relation is the same, and sometimes the relation is different but the words are the same. The same relation which is in amor 'love' and dative amori is in dolor 'pain' and dative dolori, but not in dolor and accusative dolorem. The same relation which is in amor and genitive amoris is in plural amores and genitive amorum; and yet, because the subject-matter in it is not compared as it should be, this relation cannot of itself effect Regularities, on account of the differences in the forms of the spoken word, because a singular word has been associated with a plural. So, when it is by a proportionate likeness that the

word has the same relation, then and not until then does this relation achieve what is demanded by Analogia or Regularity; of which I shall speak next.

37. There follows the third topic: What is Ratio or Relation that is proportionate 'by proportionate likeness'? This is in Greek called 'according to logos'; and from analogue the term Analogia or Regularity is derived. If there are two things of the same class which belong to some relation though in some respect unlike each other, and if alongside these two things two other things which have the same relation are placed, then because the two sets of words belong to the same logos each one is said separately to be an analogue and the comparison of the four constitutes an Analogia.

38. For it is as in a matter of twins: when we say that the one Menaechmus is like the other Menaechmus, we are speaking of one only; but when we say that a likeness is present in them, we are speaking of both. So, when we say that a copper as has the same relation to a half-as as a silver libella has to a half-libella, then we are showing what an analogue is; when we say that both in copper and in silver there is the same relation, then we are speaking of Analogia 'Regular Relation.'

39. As sodalis 'fellow' and sodalitas 'fellowship,' civis 'citizen' and civitas 'citizenship' are not the same, but both come from the same origin and are connected, so analogue and Analogia are not the same, but are likewise congenitally connected. Therefore, if you take away men, you have taken away the sodales; if you take away the sodales, you have taken away the sodalitas: just so, if you take away the logos or Relation, you have taken away the analogue, and if you have taken this away, you have taken away the Analogia.

40. Since these are of such close kinship to each other, you must listen with keen understanding rather than wait to be told, that is, when I have said something about either, it will be also of general application to both; you should not wait for me to repeat it in writing in a later part of my work, but you should rather continue to follow up the line of thought.

41. These phenomena are produced in unlike things, as in numbers, if you compare two with one and so also twenty with ten; for twenty has to ten the same relation which two has to one. It is found also in like things; in coins, for example, one denarius is to one victoriate as a second denarius is to a second victoriate. So likewise in all other things those are said to be in a status of comparative likeness, wherein there is a fourfold nature of such a kind as among children the daughter is to the mother as the son is to the father, and in matters of time the midnight is to the night as the midday is to the day.

42. The poets make a great use of this kind of relationship in their similes, and the geometricians use it with greatest keenness; in reference to speech, Aristarchus and the grammarians of his school use it with more care than others do, as when acc. amorem and dat. amori, acc. dolorem and dat. dolori are said to be like by comparative likeness, although they see that amorem is unlike amori because it is in another case, and likewise dolorem is unlike

dolori; but they say that the four are like, because they come from like words.

43. Sometimes it has two crossed relationships, in such a way that one is vertical and the other crosswise. What I mean will become clearer by this: Suppose that some numerals are so set down that in the first line there are 1 2 4 in the second line there are 10 20 40 in the third line there are 100 200 400

In this scheme of numerals there will be two examples of what I have called logos, which make different systems of Regularity: one is the twofold which is in the crosswise lines, because two is to four as one is to two; the other is the tenfold relation in the vertical lines, because ten is to one hundred as one is to ten.

44. Likewise the inflections of words may go in two directions, because from the nominative case they are inflected into the oblique cases, and from the nominative to the nominative, so that they make a similar scheme; which is in line 1: masc. nom. albus, dat. albo, gen. albi; in line 2: fem. nom. alba, dat. albae, gen. albae; in line 3: neut. nom. album, dat. albo, gen. albi. Therefore by the crosswise inflections there are made from these words systems of Regularity like Albius and Atrius, Albio and Atrio, which to be sure is only a small part of that binary scheme; and by the vertical inflections are made Albius and Atrius, Albia and Atria, which is a part of the tenfold scheme of Regularities of which I have spoken above.

45. Of that which is called Regularity, there are two kinds. One is disjoined, thus: as one is to two, so ten is to twenty. The other is conjoined, thus: as one is to two, so two is to four. Because in it two is said twice, both when we compare it with one, and then when we compare it with four, 46. this kind also is said to be fourfold by nature. So the cithers, though with seven strings, are none the less said to have two sets of four strings, because just as the sound of the first string stands in a certain relation to that of the fourth, so the fourth stands in the same relation to the seventh; the middle string is the first of the one set and the last of the other. The doctors who watch the seven days when a man is ill, note the symptoms of the illness with greater care on the fourth day, for the reason that the relation which the first day had to the fourth, foretells that the day which will be fourth from it, that is, seventh from the first, will bear the same relation to the fourth.

47. The Regularities are disjoined and fourfold in the cases of nouns, such as rex 'king,' dative regi, and lex 'law,' dative legi; they are conjoined and threefold in the three tenses of verbs, such as legebam 'I was reading,' present lego, future legam, because the relation which legebam has to lego, this same relation lego has to legam. In this, almost all men make a mistake, because they cite these verbs wrongly in the three tenses, when they wish to express them in a proportion.

48. For since some verbs denote incomplete action, like lego 'I read' and legis 'thou readest,' and others denote completed action, like legi 'I have read' and legisti 'thou hast read,' and since in the conjoined form they ought to be connected with others of their own kind and by this principle lego is rightly

related to *legebam* — *lego* is not rightly related to *legi*, because *legi* denotes something completed; so that they are wrong in finding fault with *tutudi* ‘I have pounded’ and *pupugi* ‘I have pricked,’ *tundo* and *pungo*, *tundam* and *pungam*, as well as *necatus sum* ‘I have been killed’ and *verberatus sum* ‘I have been beaten,’ *necor* and *verberor*, *necabor* and *verberabor*, because the tenses of incomplete action are like one another, and those of completed action are like one another. Thus we should say *tundebam tundo tundam*, and *tutuderam tutudi tutudero*, and in the same way *amabar amor amabor*, and *amatus eram, amatus sum, amatus ero*. Therefore those who speak against the Regularities are unfair in finding fault on the ground that whereas Regularity is fourfold by nature certain words are cited in a different way, in three tense-forms merely.

49. This seems sometimes to have fewer parts, as I have said; similarly it seems, at other times, to have more parts, as when it is thus: as one and two are to three, so two and four are to six. Yet this form is included in the fourfold type, because sets of two are compared with sets of one. In speech also, this will sometimes be found, thus: As nominative *Diomedes* is compared with genitive *Diomedis* and *Diomedis*, so from nominative *Hercules* are said the genitive forms *Herculi* and *Herculis*.

50. And as these move away from one starting-point and nominative into two oblique case-forms, so on the other hand from two starting-points of the nominative many words unite in a single oblique case-form. For as from the nominatives *Baebiei* (masc.) and *Baebiae* (fem.) comes the dative *Baebieis*, so from the nominatives *Caelii* and *Caeliae* comes *Caeliis*. From two like words forms are developed in unlike fashion, as happens in *nemus* ‘grove’ and *holus* ‘vegetable,’ plural *nemora* and *holera*. Others from unlike words are developed in like fashion, as in the articles the accusatives *hunc* and *istunc* come from *hic* ‘this’ and *iste* ‘that.’

51. Regularity has its foundations either in the will of men or in the nature of the words, or in both. By will I mean the imposition of the word-names: by nature I mean the inflection of the words, through which passage is made without special instruction. He who starts from the imposition, will say that if *dolus* ‘guile’ and *malus* ‘bad’ are alike in the nominative, there will be found in an oblique case *dolo* and *malo*. He who starts from the nature of the words, will say that if *Marco* and *Quinto* are alike in the oblique cases, there will be nominatives *Marcus* and *Quintus*. He who proceeds from both, will say that if there is a likeness, then as the change is in *servus* ‘slave’ and vocative *serve*, so also there will be *cervus* ‘stag’ and vocative *cerve*. It is a common feature of all, that the four word-forms have their inflectional changes in a proportional relation.

52. The first kind starts from the likeness in the nominatives, the second from a likeness which is in oblique cases, the third from a likeness which is in the changes from case to case. In the first kind we set out from the imposed name to the nature, in the second we go in the other direction, in the third we

go in both directions. Therefore in fact this third can be divided into two parts and called the third and the fourth, because in it the argument can actually go both forward and backward.

53. He who makes the imposed forms the starting-point for the Regularity, will have to develop the oblique forms from these; he who makes the nature the starting-point, will have to work in the other direction; he who starts from both, will have to make the rest of the inflections from the changes of the same kind. The imposition is in our power, but we are under the control of the nature of the words: for each one imposes the name as he wishes, but he inflects it as its nature requires.

54. But since a noun is imposed in two ways, either on a singular thing or on a plural — singular like *cicer* ‘chickpea,’ plural like *scalae* ‘stairs’ — and there is no doubt that the line of the inflections wherein things which are singular only will be declined, proceeds from some case of the singular, as *cicer ciceri ciceris*; and likewise that in the line of inflections which is in the plural only, it is proper to begin from some case of the plural, as *scalae scalis scalas*: another point must be examined, since their connected nature is twofold and two lines of inflections are made, like *Mars* and *Martes*, namely from what place the relation of Regularity ought to start, whether from the singular to the plural or vice versa.

55. For not even if nature does proceed from one to two, should the conclusion be drawn that in teaching the later thing cannot be the clearer, for the purpose of beginning from it, to show what the prior thing is. Therefore even those who deal with the nature of the universe and are on this account called *physici* ‘natural philosophers,’ proceed from nature as a whole and show by backward reasoning from the later things, what the beginnings of the world were. Though speech consists of letters, it is nevertheless from speech that the grammarians start in order to show the nature of the letters.

56. Therefore in the explanation, since one ought rather to set out from that which is clearer than from that which is prior, and rather from the uncorrupted than from a corrupt original, from the nature of things rather than from the fancy of men, and since these three factors which are more to be followed are less present in the singulars than in the plurals, one can more easily commence from the plural than from the singular, because in the latter as starting-points there is less of a basis for relationship in the forming of words. That the singular forms of words can be more easily interpreted from plural forms than plural forms from the singular, is shown by these words: plural *trabes* ‘beams,’ singular *trabs*; plural *duces* ‘leaders,’ singular *dux*.

57. For we see that from the plural nominatives *trabes* and *duces* the letter E of the last syllable has been eliminated and thereby in the singular have been made the nominatives *trabs* and *dux*. But on the other hand, if we start from the singulars we do not so easily see how they have become *trabs*, from B and S, and *dux*, from C and S.

58. If the nominative plural is by any chance a corrupted form, which

rarely occurs, we shall correct this before we make it our starting-point; it is proper to take from the oblique cases, either singular or plural, some forms which are not ambiguous, from which can be seen the make-up which the other forms ought to have.

59. For sometimes the one is seen from the other and at other times the other is seen from the one, as Chrysippus writes, as the father's qualities may be seen from the son, and the son's from the father, and in arches the right-hand side stands on account of the left-hand side, no less than the left on account of the right. Therefore the oblique forms can sometimes be regained from the nominatives, and sometimes the nominatives from the oblique forms; sometimes the plural from the singular forms, and sometimes the singular forms from the plural.

60. The principle that we should most of all follow, is that in this the foundation be nature, because in nature there is the easier relationship in inflections. For it is easy to note that error can more easily make its way into those impositions which are mostly made in the nominative singular, because men, being unskilled and scattered, set names on things just as their fancy has impelled them; but nature is of itself for the most part uncorrupted, unless somebody perverts it by ignorant use.

61. Therefore, if one has founded the principle of Regularity on the natural cases rather than on the imposed case-forms, not many awkwardnesses will be his to face in usage; human fancifulness will be corrected by nature, and not nature by fancy, because those who have wished to follow imposition will in reality act in the opposite way.

62. But if one should prefer to start from the singular, he ought to start from the sixth case, which is a case peculiar to Latin; for by the differences in the letters of this case-form he will be more easily able to discern the variation in the remaining cases, because the ablative forms end either in A, like *terra* 'earth,' or in E, like *lance* 'platter,' or in I, like *clavi* 'key,' or in O, like *caelo* 'sky,' or in U, like *versu* 'verse.' Therefore, for the explaining of the declensions, there is this way, which may proceed from either of two starting-points.

63. But where there is Regularity, there are three factors, one which is in the things, a second which is in the spoken words, a third which is in both; the first two are simple, the third is twofold. In view of this, attention must be given to the relation which they have to one another.

64. First, of the differences which exist in the things, there are some which have no bearing on speech, others which are connected with it. Those which are not connected with it are like those which the artificers observe in making buildings and statues and other things, of which some are called harmonic, and others are called by other names; but no one of these becomes an element in speaking.

65. The differences which pertain to speech, consist of those things which are expressed by the words in a proportionate way, and yet do not have a

likeness of the spoken words also to help in forming the inflections: such as nominative *Iupiter* and *Marspiter*, dative *Iovi* and *Marti*. For these are like one another in the gender of the nouns, and in the number, and in the cases; because both are nouns, and are masculine, and singular, and nominative and dative in case.

66. The second kind has to do with the sounds, in which the spoken words only are similar in a proportionate way — and not the things — as in *biga* and *bigae*, *nuptia* and *nuptiae*. For in these there is no underlying unit thing expressed by the singular when we say *biga* or *quadriga*, nor have the plural forms which are derived from these words any plural meaning. Yet all plurals which are derived from a unit singular, like *merulae* from *merula* ‘blackbird,’ do have such plural meaning; for they are of such a sort that there is subordination to a singular form: thus two *merulae* ‘blackbirds,’ three *catulae* ‘female puppies,’ four *faculae* ‘torches.’

67. Therefore since there cannot be the same subordinating relation because we do not say *una biga*, *duae quadrigae*, *tres nuptiae*, but instead *unae bigae* ‘one two-horse team,’ *binae quadrigae* ‘two teams of four horses,’ *trinae nuptiae* ‘three sets of nuptials,’ it is clear that *bigae* and *quadrigae* are not from *biga* and *quadriga*, but belong to another series: the usual series *una*, *duae*, *tres*, has *una* as its beginning, but in this second series *unae*, *binae*, *trinae*, the beginning is *unae*.

68. The third kind of Regularity is that which has two elements, which I mentioned, in which both the things and the spoken words are uttered with a similarity in a proportionate way, like *bonus* ‘good’ and *malus* ‘bad,’ plural *boni* and *mali*; *Aristophanes* and others have written about the Regularity in such words. And indeed this is a perfected Regularity in speech, but those two simple forms of Regularity are only incomplete beginnings; yet I shall speak of them separately, because we use them also in speaking.

69. But first I shall speak of the perfected Regularity, in which both the things and the spoken words are held together by a certain likeness; of this there are three kinds: one native, born here among us; the second coming from abroad; the third hybrid, born here of foreign paternity. The native type is such as *sutor* ‘cobbler’ and *pistor* ‘baker,’ dative *sutori* and *pistori*; the foreign type is such as *Hectōrēs* ‘men like Hector’ and *Nestōrēs* ‘men like Nestor,’ accusative *Hectōrās* and *Nestōrās*; that third type, the hybrid, consists of such words as *Achilles* and *Peles*.

70. Of these, many use the first type, not merely poets, but also almost all who speak in prose. At first they used to say *Hectōrem* and *Nestōrem* like *quaestōrem* and *praetōrem*; so *Ennius* says:

That Hector’s son be hurlèd from the Trojan wall. *Accius* in his tragedies began to take these words away from the early usage and rather to restore them to their Greek forms; hence *Valerius* says:

Accius would not use *Hectōrem*, but *Hectōra* rather.

Because most of our foreign words are Greek, it has followed that the

greatest number of the hybrid nouns which we have are also Greek in origin. Therefore, as in these types some words are Greek and others are Greek in origin, so also are the systems of Regularity.

71. Of the hybrid inflectional forms which are made from these materials in our country, some are early, like *Bacchidēs* and *Chrysidēs*, others are younger, like *Chrysidēs* and *Bacchidēs*, and still others are recent, like *Chrysidās* and *Bacchidās*; our fellow-countrymen use all three, but those who follow the middle forms in speaking give the least offence, because those of the first set seem insufficiently like the Greek forms from which they are taken, and those of the third seem insufficiently like our own forms.

72. The basis of all Regularity is a certain likeness, that, as I have said, which is wont to be in things and in spoken words and in both; we must see in which one of these sections each word should be entered, and of what sort it is. For, as I have said, neither the likeness of the things nor that of the spoken words is separately sufficient to express these double Regularities of the words, which we seek in speaking, because there must be a likeness in both respects. To introduce them into speech there must be also actual use; for the method by which you make a garment is quite different from that in which you wear it.

73. The categories of use appear to be three: one that of old usage, the second that of to-day's usage, the third that of neither. Old words are such as *cascus cascī* 'old,' *surus suri* 'stake'; words of to-day's usage, such as *albus* 'white,' *caldus* 'hot,' *datives albo* and *caldo*; words of neither usage, such as *scala* and *acc. scalam* 'stair,' *phalera* and *phaleram* 'trapping.' To these there can be added a fourth kind which does not belong exclusively to one category, like *amicitia* 'friendship' and *inimicitia* 'enmity,' *accusatives amicitiam* and *inimicitiam*. The first is that which the ancients used and we have abandoned; the second is that which we now use; the third is that which the poets use.

74. That *Analogia* or Regularity which is directed toward the nature of the words is not to be defined in the same way as that which is directed toward the actual use in speaking. For the former should be defined thus: *Analogia* is the like inflection of like words; and the latter thus: *Analogia* is the like inflection of like words, not inconsistent with common usage. But when to the end of these two there has been added "within a certain range," then poetic *Analogia* will be defined. The first of these is that which the people ought to follow; the second is that which all the individuals in the people ought to follow; and the third is that which the poets ought to follow.

75. I think that these things have been said with more care than clarity, but not more obscurely than are the definitions of the same subject given by the grammarians, such as *Aristeas*, *Aristodemus*, *Aristocles*, and others, whose obscurities are the less to be found fault with, because most definitions, being on an unknown theme and being expressed with extreme brevity, are not easily understood unless they are expounded point by point.

76. Therefore the matter will be more apparent if there is a clear exposition

of the parts one by one, as to what is meant by a word, what is meant by the likeness of the word, by inflection, by likeness of inflection not inconsistent with common usage, and by “within a certain range.”

77. By word I mean that part of spoken speech which is the smallest indivisible unit. If a word has natural inflection, then a word is like another word when it is similar to the other word in the thing which it denotes and in the spoken word by which it denotes the thing and in the form which it has after an inflectional change has taken place. Inflection is that which takes place when some change of the spoken word is made from word-form to word-form or to a new word-stem by derivation, in order to express a change of the thought. Likeness of inflection exists, when it passes from some form to another form in the same way in which that other word passes with which it is being compared.

78. There is the addition “not inconsistent with common usage,” because usage tolerates some words inflected contrary to the old practice, as it suffered Hortensius to say *cervix* ‘neck’ instead of the plural *cervices*, but does not tolerate certain others, as when you should say *faux* ‘throat’ instead of the plural *fauces*. When the addition “within a certain range” is made, it means that in the relevant words not all the forms are in use, as, for example, there is derived from *amo* ‘I love’ and *vivo* ‘I live’ the passive *amor* but not the passive *vivor*.

79. What Analogia or Regularity in speech is seen to be and what categories it has, and which of these seem essential to follow, I have set forth as briefly as I could. Now I shall speak of the categories in which it ought not to exist and yet it is usually looked for just as if it ought to be there; these are in general of four kinds. First, Regularity ought not to be looked for in such words as are not inflected, for example *nequam* ‘worthless,’ *mox* ‘soon,’ *vix* ‘hardly.’

80. Among these, a greater error is made in one word than in another. For they grant that *mox* and *vix* have no cases, but assert that *nequam* has, because we use it with nominative *hic* ‘this,’ with genitive *huius*, with dative *huic*. For when we say *hic nequam* and *huius nequam*, then we are uttering the cases of this man whom we wish to show as worthless, and before the word we then set *hic* to represent the name of him whose worthlessness we are considering.

81. This word is made like *nolo* ‘I do not wish’ from *non* ‘not’ and *volo* ‘I wish’; thus from *ne* ‘not’ and *quicquam* ‘anything,’ with loss of the middle syllable, is likewise compounded *nequam*. So as him whom we think to be *non hili* ‘worth not a whit’ we call *nihili*, him in whom we think that there is *ne quicquam* ‘not anything’ we call *nequam*.

82. Second, Regularity is not to be looked for if the words have only one case in their spoken form, because they are not inflected, like all names of letters. Third, it is not to be looked for if the series of forms which the noun has is unique and has nothing with which it can be compared, as they consider

true of caput 'head,' dat. capiti, gen. capitis, abl. capite. Fourth, it is not to be sought if those four noun-forms which are compared with one another fail to have the mutual relation which they should have, as in socer 'father-in-law' and socrus 'mother-in-law,' accusative plural soceros and socrus.

83. On the other hand, in words in which Regularity ought to be looked for, in general the same number of stages should be found in conjunction: first, the things should exist; second, the things should be in use; third, these things should have names; fourth, they should have natural inflection. As for the first stage, because the nature of plural and singular is basic, we say plural nom. asses, acc. asses, singular nom. as, acc. assem; on the other hand, because in definite plural numerals the singular nature does not exist, only plural forms are used, such as nominative duo 'two' and tres 'three,' dative duobus and tribus.

84. In the second stage, if the nature exists but there is no practice of making this kind of distinction, as happens in faba 'bean' and in that class of words which we use for one and for all collectively, without change of form: for there was no need, as in the matter of slaves...

FRAGMENTS

Fragments of Books II-IV

III

Fr. 1. Deus ‘god’ or dea ‘goddess’ is in fact a general name for all.... Varro, in the third book of the treatise addressed to Cicero, says: “So let them give answer why they say dei ‘gods,’ when in reference to all of them the old-time Romans used to say divi.”

Fr. 2. Figor ‘I am transfixed’ is by the old writers inflected in two ways in the perfect tense. For we find both fictus and fixus;... Varro in the third book of the treatise addressed to Cicero has “fixum.”

Fr. 3. Though the old writers say that the name leaena ‘lioness’ is not good Latin, still it has the force of authority. For they used to say leo ‘lion’ both as masculine and as feminine.... But lea ‘lioness’ Varro has, in the third book of the treatise addressed to Cicero: “Just as panthera ‘panther’ and lea ‘lioness’ are not.” IV

Fr. 4. Varro in the fourth book of the treatise On the Latin Language: “Prolubium and lubidoi ‘desire’ are derived from lubet ‘it is pleasing’; whence also the grove of Venus Lubentina gets its name.”

Fragment of Book VIII

Fr. 5. (5) The eighth book of Marcus Varro’s treatise On the Latin Language, addressed to Cicero, maintains that no regard is paid to Regularity, and points out that in almost all words usage rules. (6) “As when we decline,” says he, “lupus ‘wolf,’ gen. lupi, probus ‘honest,’ gen. probi, but lepus ‘hare,’ gen. leporis; again, paro ‘I prepare,’ perf. paravi, and lavo ‘I wash,’ perf. lavi, pungo ‘I prick,’ perf. pupugi, tundo ‘I pound,’ perf. tutudi, and pingo ‘I paint,’ perf. pinxi. (7) And although,” he continues, “from ceno ‘I dine’ and prandeo ‘I lunch’ and poto ‘I drink’ we form the perfects cenatus sum, pransus sum, and potus sum yet from destringor ‘I scrape myself’ and extergeor ‘I wipe myself dry’ and labor ‘I bathe myself’ we make the perfects destrinxi ‘I am scraped’ and extersi ‘I am dried’ and lavi ‘I have had a bath.’

(8) “Furthermore, although from Oscus ‘Oscan, Tuscus ‘Etruscan,’ and Graecus ‘Greek’ we derive the adverbs Osce ‘in Oscan,’ Tusce ‘in Etruscan,’ and Graece ‘in Greek,’ yet from Gallus ‘Gaul’ and Maurus ‘Moor’ we have Gallice ‘in Gallic’ and Maurice ‘in Moorish’; also from probus ‘honest’ comes probe ‘honestly,’ from doctus ‘learned’ docte ‘learnedly,’ but from rarus ‘rare’ there is no adverb rare, but some say raro, others rarer.”

(9) In the same book Varro goes on to say: “No one uses the passive sentior, and that form by itself is naught, but almost every one says adsentior ‘I agree.’ Sisenna alone used to say adsentio in the senate, and later many

followed his example, yet could not prevail over usage.”

(10) But this same Varro in other books wrote a great deal in defence of Regularity.

Fragments of Books XI–XXIV

XI

Fr. 6. Where the authority of our ancestors has not shown you the gender of a word, what in this instance must be done? Varro wrote, in the treatise addressed to Cicero: “We men have the right and power to give genders to the names of those things which by nature have no gender.”

Fr. 7a. Now let us speak of genders. Varro says: “Genera ‘genders’ are named from *generare* ‘to generate.’ For whatever *gignit* ‘begets’ or *gignitur* ‘is begotten,’ that can be called a genus and can produce a genus.” If this is true, then the genus that a thing has is not perfect unless it is masculine or feminine.

Fr. 7b. He treats of genders. Varro says: “Only those are genera ‘genders’ which *generant* ‘generate’; those are properly called genera.” But if we follow his authority, there will be only two genders, masculine and feminine. For no genders can procreate except these two.

Fr. 8. If *ostrea* ‘oyster’ is of the first declension, like *Musa* ‘Muse,’ it will be declined in the feminine gender, so that we refer the word to the living being; if we use it for the shell, then the word must be *ostreum*, inflected in the neuter and according to the second declension, so that it is genitive *ostrei*, dative *ostreo*: because Varro says: “No living creature has a name which is inflected in the neuter gender.”

Fr. 9. Plinius Secundus says, following Varro: “When we are in doubt about the gender of a main word, let us turn to the diminutive form, and from the diminutive we learn the gender of the main word. Suppose that I do not know the gender of *arbor* ‘tree’; form the diminutive *arbuscula*, and lo! from this you observe as well the gender of the word from which it comes. Again, if you say, What is the gender of *columna* ‘column’?, make from it the diminutive, that is, *columella*, and therefrom you understand that the word from which it comes is of the feminine gender.”

Fr. 10. “Diminutives always agree in gender with the words from which they come: a few differ, such as *fem*, *rana* ‘frog,’ diminutive masc. *ranunculus* ‘tadpole’; masc. *unguis* ‘nail (of finger or toe),’ fem. *ungula* ‘hoof, talon’; neut. *glandium* ‘kernel of pork,’ fem. *glandula* ‘tonsil’; masc. *panis* ‘loaf of bread,’ masc. *pastillus* and neut. *pastillum* ‘roll,’” as Varro said; “*fem*, *beta* ‘beet,’ masc. *betaceus* ‘beet-root’; fem. *malva* ‘mallow,’ masc. *malvaceus* ‘mallow-like vegetable’; neut. *pistrinum* ‘pounding-mill,’ fem. *pistrilla* ‘small mill,’ as Terence says in *The Brothers*; masc. *ensis* ‘sword,’ fem. *ensicula* and masc. *ensiculus* ‘toy-sword’: so Plautus in *The Rope*.”

Fr. 11. *Dies* ‘day’ is of common gender. Those who thought that it must be

used as a masculine, offered these reasons: that their authorities said *dies festi* ‘holidays,’ with the masculine adjective, not the fem. *festae*; that they said the fourth and the fifth day before the Kalends, with the masculine and not the feminine form of the adjective; and that when we say *hodie* ‘to-day,’ it is understood as *hoc die* ‘on this day,’ with the masculine article, and nothing else. On the other hand, those who regard *dies* as feminine, use the general argument, that in the ablative the word ends in a long E, never in a short E; and that its diminutive is the feminine *diecula* (not the masculine *dieculus*), as Terence has it:

That to you I give a daytime But Varro made the distinction, that in the masculine it means the course of one day, in the feminine a space of time: a distinction to which nobody has conformed in practice.

Fr. 12. *Catinus* ‘bowl’ is used in the masculine gender... and from it is made the diminutive *catillus*.... But Varro, in the eleventh book of his treatise addressed to Cicero, sponsored the form *catinuli*, and not *catilli*.

Fr. 13. *Naevus* ‘mole, wart,’ is of the neuter gender; but Varro in the treatise addressed to Cicero uses it as a masculine.

Fr. 14a. Yet the oldest writers are found to have employed masculine *gausapes* ‘cloth,’ and feminine *gausapa*, and neuter *gausape*, and a neuter plural *gausapa* as if from a neuter nominative singular *gausapum*.... But Varro in his treatise On the Latin Language says: “Such words, when taken from Greek, pass from the masculine to the feminine, and end in the letter A: fem, *cochlea* ‘snail’ from masc. *κοχλίας*, fem. *charta* ‘paper’ from masc. *χάρτης*, fem. *gausapa* from masc. *γασσάπης*.”

Fr. 14b. But Varro says: “Words taken from Greek, if they do not keep their own gender, pass from the masculine to the feminine in Latin and end in the letter A, like *cochlea* from *κοχλίας*, ‘pillarbust’ from *Ἐρμῆς*, *charta* from *χάρτης*, therefore *gausapa* from *γασσάπης*.”

Fr. 14c. *Margarita* ‘pearl’ is of the feminine gender, because Greek nouns ending in -ης change to A and become feminine, like fem. *charta* from masc. *χάρτης*, *margarita* from *μαργαρίτης*, or else they are of common gender, like *athleta* ‘athlete’ from *ἄθλητής*. Therefore to use *margaritum* as a neuter is wrong; and yet many have done so, like Valgius... and Varro in the eighth book of his Letters: “One *margaritum*, several *margarita*.” But Varro likewise often used *margarita* in the feminine, and so did many others; and in the genitive plural they never used any form except the feminine *margaritarum*.

Fr. 15. Nouns ending in VAS make the genitive in -SIS and -DIS: neuter nom. *vas* ‘vessel,’ gen. *vasis*. Varro mentions both in his treatise On the Latin Language, the other being masc. *vas* ‘bondsmen,’ gen. *vadis*.

Fr. 16. Nouns ending in VIS are also of the third declension and make the genitive like the nominative: *civis* ‘citizen,’ gen. *civis*; nom. *vis* ‘force,’ gen. *vis*, and also nom. plural *vis*, used by Lucretius and Varro; for the plural *vires* is always inflected in the plural number.

Fr. 17. I learn that Marcus Varro and Publius Nigidius, the most learned of

all the Romans, always said and wrote *senatus*, *domuis*, and *fluctuis* as the genitive case of the words *senatus* 'senate,' *domus* 'house,' and *fluctus* 'wave,' and used *senatui*, *domui*, *fluctui* as the dative; and that they used other similar words with the corresponding endings.

Fr. 18. *Amni* was used by Vergil as ablative of *amnis* 'river,' as in *He drifts with the stream of the river*.

On this point, Pliny in the same book says: "By the old writers, whom Varro criticizes adversely, all observance of the rule is disregarded, yet not utterly. For we still say," says he, "*canali* 'canal,' *siti* 'thirst,' *tussi* 'cough,' *febri* 'fever' as the ablative forms. But in most words the form has been changed, and uses the ablative which ends in E: *cane* 'dog,' *orbe* 'circle,' *carbone* 'charcoal,' *turre* 'tower,' *falce* 'sickle,' *igne* 'fire,' *veste* 'garment,' *fine* 'limit,' *monte* 'mountain,' *fonte* 'spring,' *ponte* 'bridge,' *strigile* 'scraper,' *tegete* 'mat,' *ave* 'bird,' *asse* 'as,' *axe* 'axle,' *nave* 'ship,' *classe* 'fleet.'"

Fr. 19. Varro, whom Pliny mentions as having said, in the eleventh book of his treatise addressed to Cicero "a plantation of trees set in rows *rure* 'in the country.'"

Fr. 20. *Fonteis* 'springs,' accusative plural spelled with EIS: "The nouns which gain an I in the genitive plural before the ending UM," says Pliny, "have the Instead of the usual locative form *ruri*. accusative in EIS, like genitive *montium* 'mountains,' accusative *monteis*; although Varro," he continues, "tried to refute this rule by examples of the following sort: to the genitive *falcium* 'sickles' the accusative is *falces* and not *falceis*, nor is the proper spelling *merceis* 'wares,' nor *axeis* 'axles,' *lintreis* 'skiffs,' *ventreis* 'bellies,' *stirpeis* 'stocks,' *urbeis* 'cities,' *corbeis* 'baskets,' *vecteis* 'levers,' *menteis* 'minds.' And yet he gives up the fight against the aforesaid rule in a ridiculous fashion, saying that apart from these nouns the rule holds."

Fr. 21. In the second and the third books Varro constantly uses the genitive *poematorum*, 'poems' and the dative *poematis*, as though the word were *poematum* in the nominative and not *poema*. For in the eleventh book of the treatise addressed to Cicero he says that genitive *poematorum* and dative *poematis* are the proper forms to be used.

Fr. 22. *Git* 'fennel': Varro in the eleventh book of the treatise addressed to Cicero states that this form ought to be used in all the cases; but people quite commonly say *gitti* in the ablative.

XIII

Fr. 23. Varro in the thirteenth book of the treatise addressed to Cicero used *palpetrae*, with T. But Fabianus, in the first book *On Animals*, wrote *palpebrae* with B. Others say that *palpetrae* means the eyelids, and *palpebrae* the eyelashes. Fr. 24. *Oxo*, ablative: "Varro, in the thirteenth book of the treatise addressed to Cicero, expresses the opinion that it is composed of olive-oil and *oxos* 'vinegar,'" says Pliny in the sixth book of the treatise entitled *Variations*

XVIII

Fr. 25. Indiscriminatum means 'without difference.' Varro in the eighteenth book of the treatise *On the Latin Language* says: "Which in this book we shall use indiscriminatum 'without distinction,' promiscuously, just as if there were no difference between them."

XXII

Fr. 26. The ablative *rure* is used by Terence in the *Eunuchus*:

I get this comfort from my near-by country-seat.

So also Varro, in the twenty-second book of the treatise addressed to Cicero, says: "I have come *rure* 'from the country.'"

XXIII

Fr. 27. Varro, in the twenty-third book of the treatise addressed to Cicero, says: "The *ingluvies* is the bulging muscles around the throat, which are produced by fatness and have creases between them." But now the word is used merely for the throat. Fr. 28. (1) When I wished to be introduced to the science of logic and instructed in it, it was necessary to take up and learn what the logicians call *εἰσαγωγαί*, or 'introductory exercises.' (2) Then because at first I had to learn about axioms, which Marcus Varro calls, now *profata* or 'propositions,' and now *proloquia* or 'forthright statements,' I sought diligently for the *Commentary on Proloquia* of Lucius Aelius, a learned man, who was the teacher of Varro; and finding it in the Library of Peace, I read it. (3) But I found in it nothing that was written to instruct or to make the matter clear; Aelius seems to have made that book rather as suggestions for his own use than for the purpose of teaching others.

(4) I therefore of necessity returned to my Greek books. From these I obtained this definition of an axiom: "a proposition complete in itself, declared with reference to itself only." (5) This I have forborne to turn into Latin, since it would have been necessary to use new and as yet uncoined words, such as, from their strangeness, the ear could hardly endure. (6) But Marcus Varro, in the twenty-fourth book of his treatise *On the Latin Language*, dedicated to Cicero, thus defines the word very briefly: "A *proloquium* is a statement in which nothing is lacking."

(7) But his definition will be clearer if I give an example. An axiom, then, or a forthright statement, if you prefer, is of this kind: "Hannibal was a Carthaginian"; "Scipio destroyed Numantia"; "Milo was found guilty of murder"; "Pleasure is neither a good nor an evil"; (8) and in general any saying which is a full and perfect thought, so expressed in words that it is necessarily either true or false, is called by the logicians an axiom; by Marcus

Varro, as I have said, a proloquium or ‘forthright statement’; but by Marcus Cicero a pronuntiatum or ‘pronouncement,’ a word however which he declared that he used “only until I can find a better one.”

(9) But what the Greeks call a συνημμένον ἀξίωμα or ‘connected axiom,’ some of our countrymen call adiunctum ‘adjoined,’ others call conexum ‘connected.’ The following are examples of this: “If Plato is walking, Plato is moving”; “If it is day, the sun is above the earth.” (10) Also what they call συμπεπλεγμένον or a ‘compound axiom,’ we call coniunctum ‘conjoined’ or copulatum ‘coupled’; for example: “Publius Scipio, son of Paulus, was twice consul and celebrated a triumph, and held the censorship, and was the colleague of Lucius Mummius in his consulship.” (11) But if in the whole of a proposition of this kind one member is false, even if the others are true, the whole is said to be false. For if to all those true statements which I have made about that Scipio I add “and he worsted Hannibal in Africa,” which is false, all those other statements which have been made in conjunction will not be true, on account of this one false statement which has been added to them, because they will now all be spoken of together as one statement of fact.

(12) There is also another form, which the Greeks call a διεξευγμένον ἀξίωμα or ‘disjunctive proposition,’ and we call disiunctum ‘separated.’ For example: “Pleasure is either good or evil, or it is neither good nor evil.” (13) Now all statements which are contrasted ought to be opposed to each other, and their opposites, which the Greeks call ἀντικείμενα, ought also to be opposed. Of all statements which are contrasted, one ought to be true and the rest false. (14) But if none at all of them is true, or if all, or more than one, are true, or if the contrasted things are not at odds, or if those which are opposed to each other are not contrary, then that is a false contrast, and is called παραδιεξευγμένον or ‘wrong-disjunctive.’ For instance, this case, in which the things which are opposed are not contraries: “Either you run or you walk or you stand.” These acts are indeed contrasted, but their opposites are not contrary; for ‘not to walk’ and ‘not to stand’ and ‘not to run’ are not contrary to one another, since those things are called ‘contraries’ which cannot be true at the same time. But you may together and at the same time neither walk nor stand nor run.

Fr. 29. Exceptions are haurio ‘I draw off,’ perfect hausi (yet haurivi or haurii also is found; Varro, in the twenty-fourth book of the treatise addressed to Cicero, says “when they haurierint ‘have drained’ from the same”), saepio ‘I fence in,’ perfect saepsi...

Fragments of Undeterminable Position

Fr. 30a. Proceres: Varro in the treatise addressed to Cicero said that proceres are those who processerunt ‘have advanced’ ahead of others, whence also those beams are called proceres which project beyond the other beams.

Fr. 30b. Proceres however, according to Varro, is a name applied to leaders of the state, because they stand out in it, just as in buildings certain mutules,

that is, heads of beams, stand out, which are called *proceres*.

Fr. 31a. *Senior*: according to Varro, *senior* and *iunior* are comparatives of diminution.... Therefore *senior* is not a man who is completely old, just as a *iunior* is not an entirely youthful person, but one not quite as much as a *iuvenis* ‘young man,’ as a *pauperior* ‘poorer’ person is not even as much as *pauper* ‘poor.’ Varro says this in the books addressed to Cicero.

Fr. 31b. *Iam senior* ‘now older’: either he set this as a positive, namely *senex*, or, as we have said, a *senior* is a vigorous old man, as a *iunior* is one not yet a youth. The matter is mentioned by Varro, and is confirmed by Pliny.

Fr. 32. But at the top of this edifice, which we have said was like a ship’s keel, he set the *caput* ‘head,’ in which there was to be the guidance of the whole creature, and the name *caput* was given to it, as indeed Varro writes in the treatise addressed to Cicero, because from it the senses and the nerves *capiant* ‘take’ their start.

Fr. 33. Some think that the stems of lupines are properly called *alae* ‘wings’; thus Aelius: “*alae* of lupine, shoots without leaves”; Cato in the *Origins*: “*alae* of lupine pulse”; Varro in the treatise *On the Latin Language* instructs us that the stalk of the bean is called an *ala*.

Fr. 34. With regard to the four conjugations, these are the principles applying to the verbs which obey Regularity; examples are set down everywhere and are well known. Anyone who has mastered them will easily avoid error. For they are set forth clearly also by Varro of the *Menippean Satire*.

Fr. 35. To *sapio* ‘I am wise,’ authors are found to have employed as perfect *sapui* or *sapii* as well as *sapivi*; yet Probus prefers *sapui*, Charisius *sapui* or *sapivi*, Asper *sapivi* or *sapii* in reliance on Varro, a view which Diomedes also approves.

Fr. 36. There are other verbs, which lack different tenses; it is the use of a form that is lacking, the reason for the meaning exists. Certain verbs lack the perfect and all the forms made from it; such are *ferio* ‘I strike,’ *sisto* ‘I put,’ *tollo* ‘I pick up,’ *fero* ‘I bear,’ *aio* ‘I say,’ *furo* ‘I am mad’ — a list which Varro sets down. Therefore for the perfects of these verbs we use the perfects of other verbs which seem to have the same meaning.

Fr. 37. *Puer* ‘boy’ the ancients used to use also as a feminine, like the Greek *παῖς*, masc. meaning ‘boy’ and fem, meaning ‘girl’; as in the old *Odyssey*, a very ancient poem:

My child, what word is this I hear fall from your lips? And in the *Song of Neleus*, which is equally old:

A wounded child, a daughter, I’ll take...

In this however Varro thinks that *puera*, with *A*, was used, but his teacher Aelius Stilo and Asinius take the opposite view.

Fr. 38. *Leontion* and *Chryson* and *Phanion* are neuters in Greek, but when we took them into Latin we made feminines of them; Plautus used *Phronesium* as a feminine, and Caecilius used *Leontium* in the same way. But Varro thinks

that such nouns are inflected only for the dative and the ablative, and that in the other cases the same form as the nominative is used.

The Latin Texts



The amphitheatre of the ancient Capua — Varro was one of the commission of twenty that carried out the great agrarian scheme of Julius Caesar for the resettlement of Capua and Campania in 59 BC.

LIST OF LATIN TEXTS



In this section of the eBook, readers can view Varro's original Latin texts. You may wish to Bookmark this page for future reference.

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On Agriculture

LIBER I

I.

Otium si essem consecutus, Fundania, commodius tibi haec scriberem, quae nunc, ut potero, exponam cogitans esse properandum, quod, ut dicitur, si est homo bulla, eo magis senex. Annus enim octogesimus admonet me ut sarcinas conligam, antequam proficiscar e vita. Quare, quoniam emisti fundum, quem bene colendo fructuosum cum facere velis, meque ut id mihi habeam curare roges, experiar; et non solum, ut ipse quoad vivam, quid fieri oporteat ut te moneam, sed etiam post mortem. Neque patiar Sibyllam non solum cecinisse quae, dum viveret, prodessent hominibus, sed etiam quae cum perisset ipsa, et id etiam ignotissimis quoque hominibus; ad cuius libros tot annis post publice solemus redire, cum desideramus, quid faciendum sit nobis ex aliquo portento: me, ne dum vivo quidem, necessariis meis quod prosit facere. Quocirca scribam tibi tres libros indices, ad quos revertare, siqua in re quaeres, quem ad modum quidque te in colendo oporteat facere. Et quoniam, ut aiunt, dei facientes adiuvant, prius invocabo eos, nec, ut Homerus et Ennius, Musas, sed duodecim deos Consentis; neque tamen eos urbanos, quorum imagines ad forum auratae stant, sex mares et feminae totidem, sed illos XII deos, qui maxime agricolarum duces sunt. Primum, qui omnis fructus agri culturae caelo et terra continent, Iovem et Tellurem: itaque, quod ii parentes, magni dicuntur, Iuppiter pater appellatur, Tellus terra mater. Secundo Solem et Lunam, quorum tempora observantur, cum quaedam seruntur et conduntur. Tertio Cererem et Liberum, quod horum fructus maxime necessari ad victum: ab his enim cibus et potio venit e fundo. Quarto Robigum ac Floram, quibus propitiis neque robigo frumenta atque arbores corrumpit, neque non tempestive florent. Itaque publice Robigo feriae Robigalia, Florae ludi Floralia instituti. Item adveneror Minervam et Venerem, quarum unius procuratio oliveti, alterius hortorum; quo nomine rustica Vinalia instituta. Nec non etiam precor Lympham ac Bonum Eventum, quoniam sine aqua omnis arida ac misera agri cultura, sine successu ac bono eventu frustratio est, non cultura. Iis igitur deis ad venerationem advocatis ego referam sermones eos quos de agri cultura habuimus nuper, ex quibus quid te facere oporteat animadvertere poteris. in quis quae non inerunt et quaeres, indicabo a quibus scriptoribus repetas et Graecis et nostris.

Qui Graece scripserunt dispersim alius de alia re, sunt plus quinquaginta. Hi sunt, quos tu habere in consilio poteris, cum quid consulere voles, Hieron Siculus et Attalus Philometor: de philosophis Democritus physicus, Xenophon Socraticus, Aristoteles et Theophrastus peripatetici, Archytas Pythagoreus: item Amphilocho Atheniensis, Anaxipolis Thasius, Apollodorus Lemnius, Aristophanes Mallotes, Antigonos Cymaeus, Agathocles Chius, Apollonius Pergamenus, Aristandros Atheniensis, Bacchius Milesius, Bion Soleus, Chaeresteus et Chaereas Athenienses, Diodorus Prieneus, Dion Colophonius,

Diophanes Nicaeensis, Epigenes Rhodios, Euagon Thasius, Euphronii duo, unus Atheniensis, alter Amphipolites, Hegesias Maronites, Menandri duo, unus Prieneus, alter Heracleotes, Nicesius Maronites, Pythion Rhodius. De reliquis, quorum quae fuerit patria non accepi, sunt Androtion, Aeschion, Aristomenes, Athenagoras, Crates, Dadis, Dionysios, Euphiton, Euphorion, Eubulus, Lysimachus, Mnaseas, Menestratus, Plentiphanes, Persis, Theophilus. Hi quos dixi omnes soluta oratione scripserunt; easdem res etiam quidam versibus, ut Hesiodus Ascræus, Menecrates Ephesius. Hos nobilitate Mago Carthaginiensis praeteriit, poenica lingua qui res dispersas comprehendit libris XXIX, quos Cassius Dionysius Uticensis vertit libris XX ac Graeca lingua Sextilio praetori misit: in quae volumina de Graecis libris eorum quos dixi adiecit non pauca et de Magonis dempsit instar librorum VIII. Hosce ipsos utiliter ad VI libros redegit Diophanes in Bithynia et misit Deiotaro regi. Quo brevius de ea re conor tribus libris exponere, uno de agri cultura, altero de re pecuaria, tertio de villaticis pastionibus, hoc libro circumcisis rebus, quae non arbitror pertinere ad agri culturam. Itaque prius ostendam, quae secerni oporteat ab ea, tum de his rebus dicam sequens naturales divisiones. Ea erunt ex radicibus trinis, et quae ipse in meis fundis colendo animadverti, et quae legi, et quae a peritis audii.

II.

Sementivis feriis in aedem Telluris veneram rogatus ab aeditumo, ut dicere didicimus a patribus nostris, ut corrigimur a recentibus urbanis, ab aedituo. Offendi ibi C. Fundanium, socerum meum, et C. Agrium equitem R. Socraticum et P. Agrasium publicanum spectantes in pariete pictam Italiam. Quid vos hic? inquam, num feriae sementivae otiosos huc adduxerunt, ut patres et avos solebant nostros? Nos vero, inquit Agrius, ut arbitror, eadem causa quae te, rogatio aeditumi. Itaque si ita est, ut annuis, morere oportet nobiscum, dum ille revertatur. Nam accersitus ab aedile, cuius procuratio huius templi est, nondum rediit et nos uti expectaremus se reliquit qui rogaret. Voltis igitur interea vetus proverbium, quod est ‘Romanus sedendo vincit’, usurpemus, dum ille venit?

Sane, inquit Agrius, et simul cogitans portam itineri dici longissimam esse ad subsellia sequentibus nobis procedit.

Cum consedissemus, Agrasius, Vos, qui multas perambulastis terras, ecquam cultiorem Italia vidistis? inquit. Ego vero, Agrius, nullam arbitror esse quae tam tota sit culta. Primum cum orbis terrae divisus sit in duas partes ab Eratosthene maxime secundum naturam, ad meridiem versus et ad septentriones, et sine dubio quoniam salubrior pars septentrionalis est quam meridiana, et quae salubriora illa fructuosiora, dicendum utique Italiam magis etiam fuisse opportunam ad colendum quam Asiam, primum quod est in Europa, secundo quod haec temperatior pars quam interior. Nam intus paene sempiternae hiemes, neque mirum, quod sunt regiones inter circum septentrionalem et inter cardinem caeli, ubi sol etiam sex mensibus continuus

non videtur. Itaque in oceano in ea parte ne navigari quidem posse dicunt propter mare congelatum. Fundanius, Em ubi tu quicquam nasci putes posse aut coli natum. Verum enim est illud Pacuvi, sol si perpetuo sit aut nox, flammeo vapore aut frigore terrae fructos omnis interire. Ego hic, ubi nox et dies modice redit et abit, tamen aestivo die, si non diffinderem meo insiticio somno meridie, vivere non possum. Illic in semenstri die aut nocte quem ad modum quicquam seri aut alescere aut meti possit? Contra quid in Italia utensile non modo non nascitur, sed etiam non egregium fit? Quod far conferam Campano? Quod triticum Apulo? Quod vinum Falerno? Quod oleum Venafro? Non arboribus consita Italia, ut tota pomarium videatur? An Phrygia magis vitibus cooperta, quam Homerus appellat ampeloessan, quam haec? Aut tritico Argos, quod idem poeta polupuron? In qua terra iugerum unum denos et quinos denos culleos fert vini, quot quaedam in Italia regiones? An non M. Cato scribit in libro Originum sic: ‘ager Gallicus Romanus vocatur, qui viritim cis Ariminum datus est ultra agrum Picentium. In eo agro aliquotfariam in singula iugera dena cullea vini fiunt’? Nonne item in agro Faventino, a quo ibi trecenariae appellantur vites, quod iugerum trecenas amphoras reddat? Simul aspicit me, Certe, inquit, Libo Marcius, praefectus fabrum tuos, in fundo suo Faventiae hanc multitudinem dicebat suas reddere vites. Duo in primis spectasse videntur Italici homines colendo, possentne fructus pro impensa ac labore redire et utrum saluber locus esset an non. Quorum si alterutrum decolat et nihilo minus quis vult colere, mente est captus adque adgnatos et gentiles est deducendus. Nemo enim sanus debet velle impensam ac sumptum facere in cultura, si videt non posse refici, nec si potest reficere fructus, si videt eos fore ut pestilentia dispereant. Sed, opinor, qui haec commodius ostendere possint adsunt. Nam C. Licinium Stolonem et Cn. Tremelium Scrofam video venire: unum, cuius maiores de modo agri legem tulerunt (nam Stolonis illa lex, quae vetat plus D iugera habere civem R.), et qui propter diligentiam culturae Stolonum confirmavit cognomen, quod nullus in eius fundo reperiri poterat stolo, quod effodiebat circum arbores e radicibus quae nascerentur e solo, quos stolones appellabant. Eiusdem gentis C. Licinius, tr. pl. cum esset, post reges exactos annis CCCLXV primus populum ad leges accipiendas in septem iugera forensia e comitio eduxit. Alterum collegam tuum, viginti virum qui fuit ad agros dividendos Campanos, video huc venire, Cn. Tremelium Scrofam, virum omnibus virtutibus politum, qui de agri cultura Romanus peritissimus existimatur. An non iure? inquam. Fundi enim eius propter culturam iucundiore spectaculo sunt multis, quam regie polita aedificia aliorum, cum huius spectatum veniant villas, non, ut apud Lucullum, ut videant pinacothecas, sed oporothecas. Huiusce, inquam, pomarii summa sacra via, ubi poma veneunt contra aurum, imago.

Illi interea ad nos, et Stolo, Num cena comessa, inquit, venimus? Nam non L. videmus Fundilium, qui nos advocavit. Bono animo este, inquit Agrius. Nam non modo ovom illud sublatum est, quod ludis circensibus novissimi curriculi finem facit quadrigis, sed ne illud quidem ovom vidimus, quod in

cenali pompa solet esse primum. Itaque dum id nobiscum una videatis ac venit aeditumus, docete nos, agri cultura quam summam habeat, utilitatemne an voluptatem an utrumque. Ad te enim rudem esse agri culturae nunc, olim ad Stolonem fuisse dicunt. Scrofa, Prius, inquit, discernendum, utrum quae serantur in agro, ea sola sint in cultura, an etiam quae inducantur in rura, ut oves et armenta. Video enim, qui de agri cultura scripserunt et Poenice et Graece et Latine, latius vagatos, quam oportuerit. Ego vero, inquit Stolo, eos non in omni re imitandos arbitror et eo melius fecisse quosdam, qui minore pomerio finierunt exclusis partibus quae non pertinent ad hanc rem. Quare tota pastio, quae coniungitur a plerisque cum agri cultura, magis ad pastorem quam ad agricolam pertinere videtur. Quocirca principes qui utrique rei praeposuntur vocabulis quoque sunt diversi, quod unus vocatur vilicus, alter magister pecoris. Vilicus agri colendi causa constitutus atque appellatus a villa, quod ab eo in eam convehuntur fructus et evehuntur, cum veneunt. A quo rustici etiam nunc quoque viam veham appellant propter vecturas et vellam, non villam, quo vehunt et unde vehunt. Item dicuntur qui vecturis vivunt velaturam facere. Certe, inquit Fundanius, aliud pastio et aliud agri cultura, sed adfinis et ut dextra tibia alia quam sinistra, ita ut tamen sit quodam modo coniuncta, quod est altera eiusdem carminis modorum incentiva, altera succentiva. Et quidem licet adicias, inquam, pastorum vitam esse incentivam, agricolarum succentivam auctore doctissimo homine Dicaearcho, qui Graeciae vita qualis fuerit ab initio nobis ita ostendit, ut superioribus temporibus fuisse doceat, cum homines pastoriciam vitam agerent neque scirent etiam arare terram aut serere arbores aut putare; ab iis inferiore gradu aetatis susceptam agri culturam. Quocirca ea succinit pastorali, quod est inferior, ut tibia sinistra a dextrae foraminibus. Agrius, Tu, inquit, tibicen non solum adimis domino pecus, sed etiam servis peculium, quibus domini dant ut pascant, atque etiam leges colonicas tollis, in quibus scribimus, colonus in agro surculario ne capra natum pascat: quas etiam astrologia in caelum recepit, non longe ab tauro. Cui Fundanius, Vide, inquit, ne, Agri, istuc sit ab hoc, cum in legibus etiam scribatur 'pecus quoddam'. Quaedam enim pecudes culturae sunt inimicae ac veneno, ut istae, quas dixisti, caprae. Eae enim omnia novella sata carpendo corrumpunt, non minimum vites atque oleas. Itaque propterea institutum diversa de causa ut ex caprino genere ad alii dei aram hostia adduceretur, ad alii non sacrificaretur, cum ab eodem odio alter videre nollet, alter etiam videre pereuntem vellet. Sic factum ut Libero patri, repertori vitis, hirci immolarentur, proinde ut capite darent poenas; contra ut Minervae caprini generis nihil immolarent propter oleam, quod eam quam laeserit fieri dicunt sterilem: eius enim salivam esse fructuis venenum: hoc nomine etiam Athenis in arcem non inigi, praeterquam semel ad necessarium sacrificium, ne arbor olea, quae primum dicitur ibi nata, a capra tangi possit. Nec ullae, inquam, pecudes agri culturae sunt propriae, nisi quae agrum opere, quo cultior sit, adiuvare, ut eae quae iunctae arare possunt. Agrasius, Si istuc ita est, inquit, quo modo pecus removeri potest ab agro,

cum stercus, quod plurimum prodest, greges pecorum ministrent? Sic, inquit Agrius, venalium greges dicemus agri culturam esse, si propter istam rem habendum statuerimus. Sed error hinc, quod pecus in agro esse potest et fructus in eo agro ferre, quod non sequendum. Nam sic etiam res aliae diversae ab agro erunt adsumendae, ut si habet plures in fundo textores atque institutos histonas, sic alios artifices.

Scrofa, Diiungamus igitur, inquit, pastionem a cultura, et siquis quid vult aliud. Anne ego, inquam, sequar Sasernarum patris et filii libros ac magis putem pertinere, figilinas quem ad modum exerceri oporteat, quam argentifodinas aut alia metalla, quae sine dubio in aliquo agro fiunt? Sed ut neque lapidicinae neque harenariae ad agri culturam pertinent, sic figilinae. Neque ideo non in quo agro idoneae possunt esse non exercendae, atque ex iis capiendi fructus: ut etiam, si ager secundum viam et opportunus viatoribus locus, aedificandae tabernae devorsoriae, quae tamen, quamvis sint fructuosae, nihilo magis sunt agri culturae partes. Non enim, siquid propter agrum aut etiam in agro profectus domino, agri culturae acceptum referre debet, sed id modo quod ex satione terra sit natum ad fruendum. Suscipit Stolo, Tu, inquit, invides tanto scriptori et obstrigillandi causa figlinas reprehendis, cum praeclara quaedam, ne laudes, praetermittas, quae ad agri culturam vehementer pertineant. Cum subrisisset Scrofa, quod non ignorabat libros et despiciebat, et Agrasius se scire modo putaret ac Stolonem rogasset ut diceret, coepit: Scribit cimices quem ad modum interfici oporteat his verbis: ‘cucumerem anguinum condito in aquam eamque infundito quo voles, nulli accedent; vel fel bubulum cum aceto mixtum, unguito lectum’. Fundanius aspicit ad Scrofam, Et tamen verum dicit, inquit, hic, ut hoc scripserit in agri cultura. Ille, Tam hercle quam hoc, siquem glabrum facere velis, quod iubet ranam luridam coicere in aquam, usque qua ad tertiam partem decoxeris, eoque unguere corpus. Ego, Quod magis, inquam, pertineat ad Fundani valetudinem in eo libro, est satius dicas: nam huiusce pedes solent dolere, in fronte contrahere rugas. Dic sodes, inquit Fundanius: nam malo de meis pedibus audire, quam quem ad modum pedes betaceos seri oporteat. Stolo subridens, Dicam, inquit, eisdem quibus ille verbis scripsit (vel Tarquennam audiui, cum homini pedes dolere coepissent, qui tui meminisset, ei mederi posse): ‘ego tui memini, medere meis pedibus, terra pestem teneto, salus hic maneto in meis pedibus’. Hoc ter noviens cantare iubet, terram tangere, despuere, ieiunum cantare. Multa, inquam, item alia miracula apud Sasernas invenies, quae omnia sunt diversa ab agri cultura et ideo repudianda. Quasi vero, inquit, non apud ceteros quoque scriptores talia reperiuntur. An non in magni illius Catonis libro, qui de agri cultura est editus, scripta sunt permulta similia, ut haec, quem ad modum placentam facere oporteat, quo pacto libum, qua ratione pernas sallere? Illud non dicis, inquit Agrius, quod scribit, ‘si velis in convivio multum bibere cenareque libenter, ante esse oportet brassicam crudam ex aceto aliqua folia quinque’.

III.

Igitur, inquit Agrasius, quae diiungenda essent a cultura cuius modi sint, quoniam discretum, de iis rebus quae scientia sit in colendo nos docete, ars id an quid aliud, et a quibus carceribus decurrat ad metas. Stolo cum aspexisset Scrofam, Tu, inquit, et aetate et honore et scientia quod praestas, dicere debes. Ille non gravatus, Primum, inquit, non modo est ars, sed etiam necessaria ac magna; eaque est scientia, quae sint in quoque agro serenda ac facienda, quo terra maximos perpetuo reddat fructus.

IV.

Eius principia sunt eadem, quae mundi esse Ennius scribit, aqua, terra, anima et sol. Haec enim cognoscenda, priusquam iacias semina, quod initium fructuum oritur. Hinc profecti agricolae ad duas metas dirigere debent, ad utilitatem et voluptatem. Utilitas quaerit fructum, voluptas delectationem: priores partes agit quod utile est, quam quod delectat. Nec non ea, quae faciunt cultura honestiorem agrum, pleraque non solum fructuosiore eadem faciunt, ut cum in ordinem sunt consita arbusta atque oliveta, sed etiam vendibiliorem atque adiciunt ad fundi pretium. Nemo enim eadem utilitati non formosius quod est emere mavult pluris, quam si est fructuosus turpis. Utilissimus autem is ager qui salubrior est quam alii, quod ibi fructus certus; contra [quod] in pestilenti calamitas, quamvis in feraci agro, colonum ad fructus pervenire non patitur. Etenim ubi ratio cum orco habetur, ibi non modo fructus est incertus, sed etiam colentium vita. Quare ubi salubritas non est, cultura non aliud est atque alea domini vitae ac rei familiaris. Nec haec non deminuitur scientia. Ita enim salubritas, quae ducitur e caelo ac terra, non est in nostra potestate, sed in naturae, ut tamen multum sit in nobis, quo graviora quae sunt ea diligentia leviora facere possimus. Etenim si propter terram aut aquam odore, quem aliquo loco eructat, pestilentior est fundus, aut propter caeli regionem ager calidior sit, aut ventus non bonus flet, haec vitia emendari solent domini scientia ac sumptu, quod permagni interest, ube sint positae villae, quanta sint, quo spectent porticibus, ostiis ac fenestris. An non ille Hippocrates medicus in magna pestilentia non unum agrum, sed multa oppida scientia servavit? Sed quid ego illum voco ad testimonium? Non hic Varro noster, cum Corcyrae esset exercitus ac classis et omnes domus repletae essent aegrotis ac funeribus, immisso fenestris novis aquilone et obstructis pestilentibus ianuaque permutata ceteraque eius generis diligentia suos comites ac familiam incolumes reduxit?

V.

Sed quoniam agri culturae quod esset initium et finis dixi, relinquitur quot partes ea disciplina habeat ut sit videndum. Equidem innumerabiles mihi videntur, inquit Agrius, cum lego libros Theophrasti complures, qui

inscribuntur phuton istorias et alteri phutikon aition. Stolo, Isti, inquit, libri non tam idonei iis qui agrum colere volunt, quam qui scholas philosophorum; neque eo dico, quo non habeant et utilia et communia quaedam. Quapropter tu potius agri culturae partes nobis expone. Scrofa, Agri culturae, inquit, quattuor sunt partes summae: e quis prima cognitio fundi, solum partesque eius quales sint; secunda, quae in eo fundo opus sint ac debeant esse culturae causa; tertia, quae in eo praedio colendi causa sint facienda; quarta, quo quicque tempore in eo fundo fieri conveniat. De his quattuor generalibus partibus singulae minimum in binas dividuntur species, quod habet prima ea quae ad solum pertinent terrae et iterum quae ad villas et stabula. Secunda pars, quae moventur atque in fundo debent esse culturae causa, est item bipertita, de hominibus, per quos colendum, et de reliquo instrumento. Tertia pars quae de rebus dividitur, quae ad quamque rem sint praeparanda et ubi quaeque facienda. Quarta pars de temporibus, quae ad solis circumitum annum sint referenda et quae ad lunae menstruum cursum. De primis quattuor partibus prius dicam, deinde subtilius de octo secundis.

VI.

Igitur primum de solo fundi videndum haec quattuor, quae sit forma, quo in genere terrae, quantus, quam per se tutus. Formae cum duo genera sint, una quam natura dat, altera quam sationes imponunt, prior, quod alius ager bene natus, alius male, posterior, quod alius fundus bene consitus est, alius male, dicam prius de naturali. Igitur cum tria genera sint a specie simplicia agrorum, campestre, collinum, montanum, et ex iis tribus quartum, ut in eo fundo haec duo aut tria sint, ut multis locis licet videre, e quibus tribus fastigiis simplicibus sine dubio infimis alia cultura aptior quam summis, quod haec calidiora quam summa, sic collinis, quod ea tepidiora quam infima aut summa: haec apparent magis ita esse in latioribus regionibus, simplicia cum sunt. Itaque ubi lati campi, ibi magis aestus, et eo in Apulia loca calidiora ac graviora, et ubi montana, ut in Vesuvio, quod leviora et ideo salubriora: qui colunt deorsum, magis aestate laborant, qui susum, magis hieme. Verno tempore in campestribus maturius eadem illa seruntur quae in superioribus et celerius hic quam illic coguntur. Nec non susum quam deorsum tardius seruntur ac metuntur. Quaedam in montanis prolixiora nascuntur ac firmiora propter frigus, ut abietes ac sappini, hic, quod tepidiora, populi ac salices: susum fertiliora, ut arbutus ac quercus, deorsum, ut nuces graecae ac mariscae fici. In collibus humilibus societas maior cum campestri fructu quam cum montano, in altis contra. Propter haec tria fastigia formae discrimina quaedam fiunt sationum, quod segetes meliores existimantur esse campestres, vineae collinae, silvae montanae. Plerumque hiberna iis esse meliora, qui colunt campestria, quod tunc prata ibi herbosa, putatio arborum tolerabilior: contra aestiva montanis locis commodiora, quod ibi tum et pabulum multum, quod in campis aret, ac cultura arborum aptior, quod tum hic frigidior aer. Campester locus is melior, qui totus aequabiliter in unam partem verget, quam is qui est

ad libellam aequos, quod is, cum aquae non habet delapsus, fieri solet uliginosus: eo magis, si quis est inaequabilis, eo deterior, quod fit propter lacunas aquosus. Haec atque huiusce modi tria fastigia agri ad colendum disperiliter habent momentum.

VII.

Stolo, Quod ad hanc formam naturalem pertinet, de eo non incommode Cato videtur dicere, cum scribit optimum agrum esse, qui sub radice montis situs sit et spectet ad meridianam caeli partem. Subicit Scrofa, De formae cultura hoc dico, quae specie fiant venustiora, sequi ut maiore quoque fructu sint, ut qui habent arbusta, si sata sunt in quincuncem, propter ordines atque intervalla modica. Itaque maiores nostri ex arvo aequae magno male consito et minus multum et minus bonum faciebant vinum et frumentum, quod quae suo quicque loco sunt posita, ea minus loci occupant, et minus officit aliud alii ab sole ac luna et vento. Hoc licet coniectura videre ex aliquot rebus, ut nuces integras quas uno modio comprehendere possis, quod putamina suo loco quaeque habet natura composita, cum easdem, si fregeris, vix sesquimodio concipere possis. Praeterea quae arbores in ordinem satae sunt, eas aequabiliter ex omnibus partibus sol ac luna coquunt. Quo fit ut uvae et oleae plures nascantur et ut celerius coquantur. Quas res duas sequuntur altera illa duo, ut plus reddant musti et olei et preti pluris.

Sequitur secundum illud, quali terra solum sit fundi, a qua parte vel maxime bonus aut non bonus appellatur. Refert enim, quae res in eo seri nascique et cuius modi possint: non enim eadem omnia in eodem agro recte possunt. Nam ut alius est ad vitem appositus, alius ad frumentum, sic de ceteris alius ad aliam rem. Itaque Cretae ad Cortyniam dicitur platanus esse, quae folia hieme non amittat, itemque in Cypro, ut Theophrastus ait, una, item Subari, qui nunc Thurii dicuntur, quercus simili esse natura, quae est in oppidi conspectu: item contra atque apud nos fieri ad Elephantinen, ut neque ficus neque vites amittant folia. Propter eandem causam multa sunt bifera, ut vitis apud mare Zmyrnae, malus in agro Consentino. Idem ostendit, quod in locis feris plura ferunt, in iis quae sunt culta meliora. Eadem de causa sunt quae non possunt vivere nisi in loco aquoso aut etiam aqua, et id discriminatim alia in lacubus, ut [h]arundines in Reatino, alia in fluminibus, ut in Epiro arbores alni, alia in mari, ut scribit Theophrastus palmas et squillas. In Gallia transalpina intus, ad Rhenum cum exercitum ducerem, aliquot regiones accessi, ubi nec vitis nec olea nec poma nascerentur, ubi agros stercorarent candida fossicia creta, ubi salem nec fossicium nec maritimum haberent, sed ex quibusdam lignis combustis carbonibus salsis pro eo uterentur. Stolo, Cato quidem, inquit, gradatim praeponens alium alio agrum meliorem dicit esse in novem discriminibus, quod sit primus ubi vineae possint esse bono vino et multo, secundus ubi hortus inriguus, tertius ubi salicta, quartus ubi oliveta, quintus ubi pratium, sextus ubi campus frumentarius, septimus ubi caedua silva, octavus ubi arbustum, nonus ubi glandaria silva. Scrofa, Scio, inquit,

scribere illum; sed de hoc non consentiunt omnes, quod alii dant primum bonis pratis, ut ego, a quo antiqui prata parata appellarunt. Caesar Vopiscus, aedilicius causam cum ageret apud censores, campos Roseae Italiae dixit esse sumen, in quo relicta pertica postridie non appareret propter herbam.

VIII.

Contra vineam sunt qui putent sumptu fructum devorare. Refert, inquam, quod genus vineae sit, quod sunt multae species eius. Aliae enim humiles ac sine ridicis, ut in Hispania, aliae sublimes, quae appellantur iugatae, ut pleraeque in Italia. Cuius generis nomina duo, pedamenta et iuga. Quibus stat rectis vinea, dicuntur pedamenta; quae transversa iunguntur, iuga: ab eo quoque vineae iugatae. Iugorum genera fere quattuor, pertica, harundo, restes, vites: pertica, ut in Falerno, harundo, ut in Arpano, restes, ut in Brundisino, vites, ut in Mediolanensi. iugationis species duae, una directa, ut in agro Canusino, altera compluviata in longitudinem et latitudinem iugata, ut in Italia pleraeque. Haec ubi domo nascuntur, vinea non metuit sumptum; ubi multa e propinqua villa, non valde. Primum genus quod dixi maxime quaerit salicta, secundum harundineta, tertium iunceta aut eius generis rem aliquam, quartum arbusta, ubi traduces possint fieri vitium, ut Mediolanenses faciunt in arboribus, quas vocant opulos, Canusini in hardulatione in ficis. Pedamentum item fere quattuor generum: unum robustum, quod optimum solet afferri in vineam e quercu ac iunipiro et vocatur ridica; alterum palus e pertica, meliore dura, quo diuturnior; quem cum infimum terra solvit, puter evertitur et fit solum summum: tertium, quod horum inopiae subsidio misit harundinetum. Inde enim aliquot colligatas libris demittunt in tubulos fictiles cum fundo pertuso, quas cuspides appellant, qua umor adventicius transire possit. Quartum est pedamentum nativum eius generis, ubi ex arboribus in arbores traductis vitibus vinea fit, quos traduces quidam rumpos appellant. Vineae altitudinis modus longitudo hominis, intervalla pedamentorum, qua boves iuncti arare possint. Ea minus sumptuosa vinea, quae sine iugo ministrat acratophoro vinum. Huius genera duo: unum, in quo terra cubilia praebet uvis, ut in Asia multis locis, quae saepe vulpibus et hominibus fit communis. Nec non si parit humus mures, minor fit vindemia, nisi totas vineas oppleris muscipulis, quod in insula Pandateria faciunt. Alterum genus vineti, ubi ea modo removetur a terra vitis, quae ostendit se adferre uvam. Sub eam, ubi nascitur uva, subiciuntur circiter bipedales e surculis furcillae, ne vindemia facta denique discat pendere in palma aut funiculo aut vinctu, quod antiqui vocabant cestum. Ibi dominus simul ac vidit occipitium vindemiatoris, furcillas reducit hibernatum in tecta, ut sine sumptu harum opera altero anno uti possit. Hac consuetudine in Italia utuntur Reatini. Haec ideo varietas maxime, quod terra cuius modi sit refert. Ubi enim natura umida, ibi altius vitis tollenda, quod in partu et alimonio vinum non ut in calice quaerit aquam, sed solem. Itaque ideo, ut arbitror, primum e vinea in arbores escendit vitis.

Terra, inquam, cuius modi sit refert et ad quam rem bona aut non bona sit. Ea tribus modis dicitur, communi et proprio et mixto. Communi, ut cum dicimus orbem terrae et terram Italianam aut quam aliam. In ea enim et lapis et harena et cetera eius generis sunt in nominando comprehensa. Altero modo dicitur terra proprio nomine, quae nullo alio vocabulo neque cognomine adiecto appellatur. Tertio modo dicitur terra, quae est mixta, in qua seri potest quid et nasci, ut argillosa aut lapidosa, sic aliae, cum in hac species non minus sint multae quam in illa communi propter admixtiones. In illa enim cum sint dissimili vi ac potestate partes permultae, in quis lapis, marmor, rudus, harena, sabulo, argilla, rubrica, pulvis, creta, cinis, carbunculus, id est quae sole perferve ita fit, ut radices satorum comburat, ab iis quae proprio nomine dicitur terra, cum est admixta ex iis generibus aliqua re, dicitur aut cretosa * *

* sic ab aliis generum discriminibus mixta. Horum varietatis ita genera haec, ut praeterea subtiliora sint alia, minimum in singula facie terna, quod alia terra est valde lapidosa, alia mediocriter, alia prope pura. Sic de aliis generibus reliquis admixtae terrae tres gradus ascendunt eosdem. Praeterea hae ipsae ternae species ternas in se habent alias, quod partim sunt umidiore, partim aridiore, partim mediocres. Neque non haec discrimina pertinent ad fructus vehementer. Itaque periti in loco umidiore far adorem potius serunt quam triticum, contra in aridiore hordeum potius quam far, in mediocri utrumque. Praeterea etiam discrimina omnium horum generum subtiliora alia, ut in sabulosa terra, quod ibi refert sabulo albus sit an rubicundus, quod subalbus ad serendos surculos alienus, contra rubicundior appositus. Sic magna tria discrimina terrae, quod refert utrum sit macra an pinguis an mediocris, quod ad culturam pinguis fecundior ad multa, macra contra. Itaque in tenui, ut in Pupinia, neque arbores prolixae neque vites feraces, neque stramenta videre crassa possis neque ficum mariscam et arbores plerasque ac prata retorrida muscosa. Contra in agro pingui, ut in Etruria, licet videre et segetes fructuosas ac restibilis et arbores prolixas et omnia sine musco. In mediocri autem terra, ut in Tiburti, quo propius accedit ut non sit macra, quam ut sit ieiuna, eo ad omnes res commodior, quam si inclinabit ad illud quod deterius. Stolo, Non male, inquit, quae sit idonea terra ad colendum aut non, Diophanes Bithynos scribit signa sumi posse aut ex ipsa aut quae nascuntur ex iis: ex ipsa, si sit terra alba, si nigra, si levis, quae cum fodiat, facile frietur, natura quae non sit cineracia neve vehementer densa: ex iis autem quae enata sunt fera, si sunt prolixa atque quae ex iis nasci debent earum rerum feracia. Sed quod sequitur, tertium illud de modis dic.

Ille, Modos, quibus metirentur rura, alius alios constituit. Nam in Hispania ulteriore metiuntur iugis, in Campania versibus, apud nos in agro Romano ac Latino iugeris. Iugum vocant, quod iuncti boves uno die exarare possint.

Versum dicunt centum pedes quoquo versum quadratum. Iugerum, quod quadratos duos actus habeat. Actus quadratus, qui et latus est pedes CXX et longus totidem: is modus acnua latine appellatur. Iugeri pars minima dicitur scripulum, id est decem pedes et longitudine et latitudine quadratum. Ab hoc principio mensores non numquam dicunt in subsicivum esse unciam agri aut sextantem, sic quid aliud, cum ad iugerum pervenerunt, quod habet iugerum scripula CCLXXXVIII, quantum as antiquos noster ante bellum punicum pendebat. Bina iugera quod a Romulo primum divisa dicebantur viritim, quae heredem sequerentur, heredium appellarunt. Haec postea centum centuria. Centuria est quadrata, in omnes quattuor partes ut habeat latera longa pedum *
*CD. Hae porro quattuor, centuriae coniunctae ut sint in utramque partem binae, appellantur in agris divisae viritim publice saltus.

XI.

In modo fundi non animadverso lapsi multi, quod alii villam minus magnam fecerunt, quam modus postulavit, alii maiorem, cum utrumque sit contra rem familiarem ac fructum. Maiora enim tecta et aedificamus pluris et tuemur sumptu maiore. Minora cum sunt, quam postulat fundus, fructus solent disperire. Dubium enim non est quin cella vinaria maior sit facienda in eo agro, ubi vineta sint, ampliora ut horrea, si frumentarius ager est. Villa aedificanda potissimum ut intra saepta villae habeat aquam, si non, quam proxime: primum quae ibi sit nata, secundum quae influat perennis. Si omnino aqua non est viva, cisternae faciendae sub tectis et lacus sub dio, ex altero loco ut homines, ex altero ut pecus uti possit.

XII.

Danda opera ut potissimum sub radicibus montis silvestris villam ponat, ubi pastiones sint laxae, item ut contra ventos, qui saluberrimi in agro flabunt. Quae posita est ad exortos aequinoctiales, aptissima, quod aestate habet umbram, hieme solem. Sin cogare secundum flumen aedificare, curandum ne adversum eam ponas; hieme enim fiet vehementer frigida et aestate non salubris. Advertendum etiam, siqua erunt loca palustria, et propter easdem causas, et quod crescunt animalia quaedam minuta, quae non possunt oculi consequi, et per aera intus in corpus per os ac nares perveniunt atque efficiunt difficilis morbos. Fundanius, Quid potero, inquit, facere, si istius modi mi fundus hereditati obvenerit, quo minus pestilentia noceat? Istuc vel ego possum respondere, inquit Agrius; vendas, quot assibus possis, aut si nequeas, relinquas. At Scrofa, Vitandum, inquit, ne in eas partes spectet villa, e quibus ventus gravior afflare soleat, neve in convalli cava et ut potius in sublimi loco aedifices, qui quod perflatur, siquid est quod adversarium inferatur, facilius discutitur. Praeterea quod a sole toto die inlustratur, salubrior est, quod et bestiolae, siquae prope nascuntur et inferuntur, aut efflantur aut aritudine cito pereunt. Nimbi repentini ac torrentes fluvii periculosi illis, qui in humilibus ac

cavis locis aedificia habent, et repentinae praedonum manus quod improvisos facilius opprimere possunt, ab hac utraque re superiora loca tutiora.

XIII.

In villa facienda stabula ita, ut bubilia sint ibi, hieme quae possint esse caldiora. Fructus, ut est vinum et oleum, loco plano in cellis, item vasa vinaria et olearia potius faciendum; aridus, ut est faba et faenum, in tabulatis. Familia ubi versetur providendum, si fessi opere aut frigore aut calore, ubi commodissime possint se quiete recipere. Vilici proximum ianuam cellam esse oportet eumque scire, qui introeat aut exeat noctu quidve ferat, praesertim si ostiarius est nemo. In primis culina videnda ut sit admota, quod ibi hieme antelucanis temporibus aliquot res conficiuntur, cibus paratur ac capitur. Faciundum etiam plaustris ac cetero instrumento omni in cohorte ut satis magna sint tecta, quibus caelum pluvium inimicum. Haec enim si intra clausum in consaepto et sub dio, furem modo non metuunt, adversus tempestatem nocentem non resistunt. Cohortes in fundo magno duae aptiores: una ut interdus conpluvium habeat lacum, ubi aqua saliat, qui intra stylobatas, cum velit, sit semipiscina. Boves enim ex arvo aestate reducti hic bibunt, hic perfunduntur, nec minus e pabulo cum redierunt anseres, sues, porci. In cohorte exteriori lacum esse oportet, ubi maceretur lupinum, item alia quae demissa in aquam ad usum aptiora fiunt. Cohors exterior crebro operta stramentis ac palea occulcata pedibus pecudum fit ministra fundo, ex ea quod evehatur. Secundum villam duo habere oportet stercilina aut unum bifariam divisum. Alteram enim partem fieri oportet novam, alteram veterem tolli in agrum, quod enim quam recens quod confracuit melius. Nec non stercilinum melius illud, cuius latera et summum virgis ac fronde vindicatum a sole. Non enim sucum, quem quaerit terra, solem ante exugere oportet. Itaque periti, qui possunt, ut eo aqua influat eo nomine faciunt (sic enim maxime retinetur sucus) in eoque quidam sellas familiaricas ponunt. Aedificium facere oportet, sub quod tectum totam fundi subicere possis messem, quod vocant quidam nubilarium. Id secundum aream faciendum, ubi triturus sis frumentum, magnitudine pro modo fundi, ex una parti apertum, et id ab area, quo et in tritura prouere facile possis et, si nubilare coepit, inde ut rursus celeriter reicere. Fenestras habere oportet ex ea parti, unde commodissime perflari possit. Fundanius, Fructuosior, inquit, est certe fundus propter aedificia, si potius ad anticorum diligentiam quam ad horum luxuriam derigas aedificationem. Illi enim faciebant ad fructum rationem, hi faciunt ad libidines indomitas. Itaque illorum villae rusticae erant maioris preti quam urbanae, quae nunc sunt pleraque contra. Illic laudabatur villa, si habebat culinam rusticam bonam, praesepis laxas, cellam vinariam et oleariam ad modum agri aptam et pavimento proclivi in lacum, quod saepe, ubi conditum novum vinum, orcae in Hispania fervore musti ruptae neque non dolea in Italia. Item cetera ut essent in villa huiusce modi, quae cultura quaereret, providebant. Nunc contra villam urbanam quam maximam ac politissimam habeant dant

operam ac cum Metelli ac Luculli villis pessimo publico aedificatis certant. Quo hi laborant ut spectent sua aestiva triclinaria ad frigus orientis, hiberna ad solem occidentem, potius quam, ut antiqui, in quam partem cella vinaria aut olearia fenestras haberet, cum fructus in ea vinarius quaerat ad dolia aera frigidior, item olearia calidior. Item videre oportet, si est collis, nisi quid impedit, ut ibi potissimum ponatur villa.

XIV.

Nunc de saeptis, quae tutandi causa fundi aut partis fiant, dicam. Earum tutelarum genera IIII, unum naturale, alterum agreste, tertium militare, quartum fabrilis. Horum unum quodque species habet plures. Primum naturale saepimentum, quod opseri solet virgultis aut spinis, quod habet radices ac vivit, praetereuntis lascivi non metuet facem ardentem. Secunda saeps est agrestis e ligno, sed non vivit: fit aut palis statutis crebris et virgultis implicatis aut latis perforatis et per ea foramina traiectionis longioris fere binis aut ternis aut ex arboribus truncis demissis in terram deinceps constitutis. Tertium militare saepimentum est fossa et terreus agger. Sed fossa ita idonea, si omnem aquam, quae e caelo venit, recipere potest aut fastigium habet, ut exeat e fundo. Agger is bonus, qui intrinsecus iunctus fossa aut ita arduus, ut eum transcendere non sit facile. Hoc genus saepes fieri secundum vias publicas solent et secundum amnes. Ad viam Salariam in agro Crustumino videre licet locis aliquot coniunctos aggeres cum fossis, ne flumen agris noceat. Aggeres faciunt sine fossa: eos quidam vocant muros, ut in agro Retino. Quartum fabrilis saepimentum est novissimum, maceria. Huius fere species quattuor, quod fiunt e lapide, ut in agro Tusculano, quod e lateribus coctilibus, ut in agro Gallico, quod e lateribus crudis, ut in agro Sabino, quod ex terra et lapillis compositis in formis, ut in Hispania et agro Tarentino.

XV.

Praeterea sine saeptis fines praedi satione arborum tutiores fiunt, ne familiae rixentur cum vicinis ac limites ex litibus iudicem quaerant. Serunt alii circum pinos, ut habet uxor in Sabinis, alii cupressos, ut ego habui in Vesuvio, alii ulmos, ut multi habent in Crustumino: ubi id pote, ut ibi, quod est campus, nulla potior serenda, quod maxime fructuosa, quod et sustinet saepe ac cogit aliquot corbularum uvarum et frondem iucundissimam ministrat ovibus ac bubus ac virgas praebet saepibus et foco ac furno. Scrofa, Igitur primum haec, quae dixi, quattuor videnda agricolae, de fundi forma, de terrae natura, de modo agri, de finibus tuendis.

XVI.

Relinquitur altera pars, quae est extra fundum, cuius appendices et vehementer pertinent ad culturam propter adfinitatem. Eius species totidem: si

vicina regio est infesta; si quo neque fructus nostros exportare expediat neque inde quae opus sunt adportare; tertium, si viae aut fluvii, qua portetur, aut non sunt aut idonei non sunt; quartum, siquid ita est in confinibus fundis, ut nostris agris prosit aut noceat. E quis quattuor quod est primum, refert infesta regio sit necne. Multos enim agros egregios colere non expedit propter latrocinia vicinorum, ut in Sardinia quosdam, qui sunt prope Oelium, et in Hispania prope Lusitaniam. Quae vicinitatis invectos habent idoneos, quae ibi nascuntur ubi vendant, et illinc invectos opportunos quae in fundo opus sunt, propter ea fructuosa. Multi enim habent, in praediis quibus frumentum aut vinum aliudve quid desit, importandum; contra non pauci, quibus aliquid sit exportandum. Itaque sub urbe colere hortos late expedit, sic violaria ac rosaria, item multa quae urbs recipit, cum eadem in longinquo praedio, ubi non sit quo deferri possit venale, non expediat colere. Item si ea oppida aut vici in vicinia aut etiam divitum copiosi agri ac villae, unde non care emere possis quae opus sunt in fundum, quibus quae supersint venire possint, ut quibusdam pedamenta aut perticae aut harundo, fructuosior fit fundus, quam si longe sint importanda, non numquam etiam, quam si colendo in tuo ea parare possis. Itaque in hoc genus coloni potius anniversarios habent vicinos, quibus imperent, medicos, fullones, fabros, quam in villa suos habeant, quorum non numquam unius artificis mors tollit fundi fructum. Quam partem lati fundi divites domesticae copiae mandare solent. Si enim a fundo longius absunt oppida aut vici, fabros parant, quos habeant in villa, sic ceteros necessarios artifices, ne de fundo familia ab opere discedat ac profestis diebus ambulet feriata potius, quam opere faciendo agrum fructuosiores reddat. Itaque ideo Sasernae liber praecipit, nequis de fundo exeat praeter vilicum et promum et unum, quem vilicus legat; siquis contra exierit, ne impune abeat; si abierit, ut in vilicum animadvertatur. Quod potius ita praecipendum fuit, nequis iniussu vilici exierit, neque vilicus iniussu domini longius, quam ut eodem die rediret, neque id crebrius, quam opus esset fundo. Eundem fundum fructuosiores faciunt vecturae, si viae sunt, qua plaustra agi facile possint, aut flumina propinqua, qua navigari possit, quibus utrisque rebus evehi atque invehi ad multa praedia scimus. Refert etiam ad fundi fructus, quem ad modum vicinus in confinio consitum agrum habeat. Si enim ad limitem querquetum habet, non possis recte secundum eam silvam serere oleam, quod usque eo est contrarium natura, ut arbores non solum minus ferant, sed etiam fugiant, ut introrsum in fundum se reclinent, ut vitis adsita ad holus facere solet. Ut quercus, sic iugulandes magnae et crebrae finitimae fundi oram faciunt sterilem.

XVII.

De fundi quattuor partibus, quae cum solo haerent, et alteris quattuor, quae extra fundum sunt et ad culturam pertinent, dixi. Nunc dicam, agri quibus rebus colantur. Quas res alii dividunt in duas partes, in homines et adminicula hominum, sine quibus rebus colere non possunt; alii in tres partes, instrumenti

genus vocale et semivocale et mutum, vocale, in quo sunt servi, semivocale, in quo sunt boves, mutum, in quo sunt plaustra. Omnes agri coluntur hominibus servis aut liberis aut utrisque: liberis, aut cum ipsi colunt, ut plerique pauperculi cum sua progenie, aut mercennariis, cum conducticiis liberorum operis res maiores, ut vindemias ac faenisicia, administrant, iique quos obaerarios nostri vocitarunt et etiam nunc sunt in Asia atque Aegypto et in Illyrico complures. De quibus universis hoc dico, gravia loca utilius esse mercennariis colere quam servis, et in salubribus quoque locis opera rustica maiora, ut sunt in condendis fructibus vindemiae aut messis. De iis, cuius modi esse oporteat, Cassius scribit haec: operarios parandos esse, qui laborem ferre possint, ne minores annorum XXII et ad agri culturam dociles. Eam coniecturam fieri posse ex aliarum rerum imperatis, et in eo eorum e noviciis requisitione, ad priorem dominum quid factitarint.

Mancipia esse oportere neque formidulosa neque animosa. Qui praesint esse oportere, qui litteris atque aliqua sint humanitate imbuti, frugi, aetate maiore quam operarios, quos dixi. Facilius enim iis quam qui minore natu sunt dicto audientes. Praeterea potissimum eos praeesse oportere, qui periti sint rerum rusticarum. Non solum enim debere imperare, sed etiam facere, ut facientem imitetur et ut animadvertat eum cum causa sibi praeesse, quod scientia praestet. Neque illis concedendum ita imperare, ut verberibus coerceant potius quam verbis, si modo idem efficere possis. Neque eiusdem nationis plures parandos esse: ex eo enim potissimum solere offensiones domesticas fieri. Praefectos alacriores faciendum praemiis dandaque opera ut habeant peculium et coniunctas conservas, e quibus habeant filios. Eo enim fiunt firmiores ac coniunctiores fundo. Itaque propter has cognationes Epiroticae familiae sunt inlustriores ac cariores. Inliciendam voluntatem praefectorum honore aliquo habendo, et de operariis qui praestabunt alios, communicandum quoque cum his, quae facienda sint opera, quod, ita cum fit, minus se putant despici atque aliquo numero haberi a domino. Studiosiores ad opus fieri liberalius tractando aut cibariis aut vestitu largiore aut remissione operis concessioneve, ut peculiare aliquid in fundo pascere liceat, huiusce modi rerum aliis, ut quibus quid gravius sit imperatum aut animadversum qui, consolando eorum restituat voluntatem ac benevolentiam in dominum.

XVIII.

De familia Cato derigit ad duas metas, ad certum modum agri et genus sationis, scribens de olivetis et vineis ut duas formulas: unam, in qua praecipit, quo modo olivetum agri iugera CCXL instruere oporteat. Dicit enim in eo modo haec Mancipia XIII habenda, vilicum, vilicam, operarios V, bubulcos III, asinarium I, subulcum I, opilionem I. Alteram formulam scribit de vinearum iugeribus C, ut dicat haberi oportere haec XV Mancipia, vilicum, vilicam, operarios X, bubulcum, asinarium, subulcum. Saserna scribit satis esse ad iugera VIII hominem unum: ea debere eum confodere diebus XLV tametsi quaternis operis singula iugera possit; sed relinquere se operas XIII

valetudini, tempestati, inertiae, indiligentiae. Horum neuter satis dilucide modulos reliquit nobis, quod Cato si voluit, debuit sic, ut pro portione ad maiorem fundum et minorem adderemus et demeremus. Praeterea extra familiam debuit dicere vilicum et vilicam. Neque enim, si minus CCXL iugera oliveti colas, non possis minus uno vilico habere, nec, si bis tanto ampliozem fundum aut eo plus colas, ideo duo vilici aut tres habendi. Fere operarii modo et bubulci pro portione addendi ad maioris modos fundorum, ii quoque, si similis est ager. Sin est ita dissimilis, ut arari non possit, quod sit confragosus atque arduis clivis, minus multi opus sunt boves et bubulci. Mitto illut, quod modum neque unum nec modicum proposuit CCXL iugerum (modicus enim centuria, et ea CC iugerum), e quo quom sexta pars sit ea XL, quae de CCXL demuntur, non video quem ad modum ex eius praecepto demam sextam partem et de XIII mancipiis, nihilo magis, si vilicum et vilicam removero, quem ad modum ex XI sextam partem demam. Quod autem ait in C iugeribus vinearum opus esse XV mancipia, siquis habebit centuriam, quae dimidium vineti, dimidium oliveti, sequetur ut duo vilicos et duas vilicas habeat, quod est deridiculum. Quare alia ratione modus mancipiorum generatim est animadvertendus et magis in hoc Saserna probandus, qui ait singula iugera quaternis operis uno operario ad conficiendum satis esse. Sed si hoc in Sasernae fundo in Gallia satis fuit, non continuo idem in agro Ligusco montano. Itaque de familiae magnitudine et reliquo instrumento commodissime scies quantam pares, si tria animadverteris diligenter: in vicinitate praedia cuius modi sint et quanta, et quot quaeque hominibus colantur, et quot additis operis aut demptis melius aut deterius habeas cultum. Bivium nobis enim ad culturam dedit natura, experientiam et imitationem. Antiquissimi agricolae temptando pleraque constituerunt, liberi eorum magnam partem imitando. Nos utrumque facere debemus, et imitari alios et aliter ut faciamus experientia temptare quaedam, sequentes non aleam, sed rationem aliquam: ut si altius repastinaverimus aut minus quam alii, quod momentum ea res habeat, ut fecerunt ii in sariendo iterum et tertio, et qui insitiones ficulnas ex verno tempore in aestivum contulerunt.

XIX.

De reliqua parte instrumenti, quod semivocale appellavi, Saserna ad iugera CC arvi boum iuga duo satis esse scribit, Cato in olivetis CCXL iugeris boves trinos. Ita fit ut, si Saserna dicit verum, ad C iugera iugum opus sit, si Cato, ad octogena. Sed ego neutrum modum horum omnem ad agrum convenire puto et utrumque ad aliquem. Alia enim terra facilior aut difficilior est: aliam terram boves proscindere nisi magnis viribus non possunt et saepe fracta bura relinquunt vomerem in arvo. Quo sequendum nobis in singulis fundis, dum sumus novicii, triplici regula, superioris domini instituto et vicinorum et experientia quadam. Quod addit asinos qui stercus vectent tres, asinum molarium, in vinea iugerum C iugum boum, asinorum iugum, asinum molendarium: in hoc genere semivocalium adiciendum de pecore ea sola quae

agri colendi causa erunt et quae solent esse peculiaria pauca habenda, quo facilius mancipia se tueri et assidua esse possint. In eo numero non modo qui prata habent, ut potius oves quam sues habeant curant, sed etiam qui non solum pratorum causa habent, propter stercus. De canibus vero utique, quod villa sine iis parum tuta.

XX.

Igitur de omnibus quadripedibus prima est probatio, qui idonei sint boves, qui arandi causa emuntur. Quos rudis neque minoris trimos neque maioris quadrimos parandum: ut viribus magnis sint ac pares, ne in opere firmior inbecillioem conficiat: amplis cornibus et nigris potius quam aliter ut sint, lata fronte, naribus simis, lato pectore, crassis coxendicibus. Hos veteranos ex campestribus locis non emendum in dura ac montana, nec non contra si incidit, ut sit vitandum. Novellos cum quis emerit iuvenco, si eorum colla in furcas destitutas incluserit ac dederit cibum, diebus paucis erunt mansueti et ad domandum proni. Tum ita subigendum, ut minutatim adsuefaciant et ut tironem cum veterano adiungant (imitando enim facilius domatur), et primum in aequo loco et sine aratro, tum eo levi, principio per harenam aut molliorem terram. Quos ad vecturas, item instituendum ut inania primum ducant plaustra et, si possis, per vicum aut oppidum: creber crepitus ac varietas rerum consuetudine celeberrima ad utilitatem adducit. Neque pertinaciter, quem feceris dextrum, in eo manendum, quod, si alternis fit sinister, fit laboranti in alterutra parte requies. Ubi terra levis, ut in Campania, ibi non bubus gravibus, sed vaccis aut asinis quod arant, eo facilius ad aratrum leve adduci possunt, ad molas et ad ea, siquae sunt, quae in fundo convehuntur. In qua re alii asellis, alii vaccis ac mulis utuntur, exinde ut pabuli facultas est; Nam facilius asellus quam vacca alitur, sed fructuosior haec. In eo agricolae hoc spectandum, quo fastigio sit fundus. In confragoso enim haec ac difficili valentiora parandum et potius ea quae per se fructum reddere possint, cum idem operis faciant.

XXI.

Canes potius cum dignitate et acres paucos habendum quam multos, quos consuefacias potius noctu vigilare et interdiu clausos dormire. De indomitis quadripedibus ac pecore faciendum: si prata sunt in fundo neque pecus habet, danda opera ut pabulo vendito alienum pecus in suo fundo pascat ac stabulet.

XXII.

De reliquo instrumento muto, in quo sunt corbulae, dolia, sic alia, haec praecipienda. Quae nasci in fundo ac fieri a domesticis poterunt, eorum nequid ematur, ut fere sunt quae ex viminibus et materia rustica fiunt, ut corbes, fiscinae, tribula, valli, rastelli; sic quae fiunt de cannabi, lino, iunco, palma, scirpo, ut funes, restes, tegetes. Quae e fundo sumi non poterunt, ea si

empta erunt potius ad utilitatem quam ob speciem, sumptu fructum non extenuabunt; eo magis, si inde empti erunt potissimum, ubi ea et bona et proxime et vilissimo emi poterunt. Cuius instrumenti varia discrimina ac multitudo agri magnitudine finitur, quod plura opus sunt, si fines distant late. Itaque, Stolo inquit, proposita magnitudine fundi de eo genere Cato scribit, oliveti iugera CCXL qui coleret, eum instruere ita oportere, ut faceret vasa olearia iuga quinque, quae membratim enumerat, ut ex aere ahenea, urceos, nassiternam, item alia: sic e ligno et ferro, ut plostra maiora tria, aratra cum vomeribus sex, crates stercorarias quattuor, item alia; sic de ferramentis quae sint et qua opus multitudine, ut ferreas octo, sarcula totidem, dimidio minus palas, item alia. Item alteram formulam instrumenti fundi vinarii fecit, in qua scribit, si sit C iugerum, habere oportere vasa torcularia instructa trina, dolia cum operculis culleorum octingentorum, acinaria viginti, frumentaria viginti, item eius modi alia. Quae minus multa quidem alii, sed tantum numerum culleorum scripsisse puto, ne cogeretur quotannis vendere vinum. Vetera enim quam nova et eadem alio tempore quam alio pluris. Item sic de ferramentorum varietate scribit permulta, et genere et multitudine qua sint, ut falces, palas, rastros, sic alia, quorum non nulla genera species habent plures, ut falces. Nam dicuntur ab eodem scriptore vineaticae opus esse XL, sirpiculae V, silvaticae V, arborariae III, rustariae X. Hic haec. At Scrofa, Instrumentum et suppellectilem rusticam omnem oportet habere scriptam in urbe et rure dominum, vilicum contra ea ruri omnia certo suo quoque loco ad villam esse posita; quae non possunt esse sub clavi, quam maxime facere ut sint in conspectu oportet, eo magis ea quae in rariore sunt usu, ut quibus in vindemia utuntur et corbulae, et sic alia. Quae enim res cotidie videntur, minus metuunt furem.

XXIII.

Suscipit Agrasius, Et quoniam habemus illa duo prima ex divisione quadripartita, de fundo et de instrumento, quo coli solet, de tertia parte expecto. Scrofa, Quoniam fructum, inquit, arbitror esse fundi eum qui ex eo satus nascitur utilis ad aliquam rem, duo considerata, quae et quo quidque loco maxime expediat serere. Alia enim loca adposita sunt ad faenum, alia ad frumentum, alia ad vinum, alia ad oleum, sic ad pabulum quae pertinent, in quo est ocinum, farrago, vicia, medica, cytiscum, lupinum. Neque in pingui terra omnia seruntur recte neque in macra nihil. Rectius enim in tenuiore terra ea quae non multo indigent suco, ut cytisum et legumina praeter cicer; hoc enim quoque legumen, ut cetera quae velluntur e terra, non subsecantur, quae, quod ita leguntur, legumina dicta. In pingui rectius quae cibi sunt maioris, ut holus, triticum, siligo, linum. Quaedam etiam serenda non tam propter praesentem fructum quam in annum prospicientem, quod ibi subsecta atque relictia terram faciunt meliorem. Itaque lupinum, cum minus siliculam cepit, et non numquam fabalia, si ad siliquas non ita pervenit, ut fabam legere expediat, si ager macrior est, pro stercore inarare solent. Nec minus ea

discriminanda in conserendo quae sunt fructuosa, propter voluptatem, ut quae pomaria ac floralia appellantur, item illa quae ad hominum victum ac sensum delectationemque non pertinent neque ab agri utilitate sunt diiuncta. Idoneus locus eligendus, ubi facias salictum et harundinetum, sic alia quae umidum locum quaerunt, contra ubi segetes frumentarias, ubi fabam potissimum seras, item alia quae arida loca secuntur: sic ut umbrosis locis alia seras, ut corrudam, quod ita petit asparagus; aprica, ut ibi seras violam et hortos facias, quod ea sole nutricantur, sic alia. Et alio loco virgulta serenda, ut habeas vimina, unde viendo quid facias, ut sirpeas, vallus, crates; alio loco ut seras ac colas silvam caeduum, alio ubi aucupere, sic ubi cannabim, linum, iuncum, spartum, unde nectas bubus soleas, lineas, restis, funes. Quaedam loca eadem alia ad serendum idonea. Nam et in recentibus pomariis dissitis seminibus in ordinemque arbusculis positis primis annis, antequam radices longius procedere possint, alii conserunt hortos, alii quid aliud, neque cum convaluerunt arbores, idem faciunt, ne violent radices.

XXIV.

Stolo, Quod ad haec pertinet, Cato non male, quod scribit de sationibus, ager crassus et laetus si sit sine arboribus, eum agrum frumentarium fieri oportere; idem ager si nebulosus sit, rapa, raphanos, milium, panicum; in agro crasso et calido oleam conditaneam, radium maiorem, Sallentinam, orcitem, poseam, Sergianam, Colminiam, albicerem, quam earum in iis locis optimam dicant esse, eam maxime serere. Agrum oliveto conserendo, nisi qui in ventum favonium spectet et soli ostentus sit, alium bonum nullum esse. Qui ager frigidior et macrior sit, ibi oleam licinianam seri oportere. Si in loco crasso aut calido posueris, hostum nequam fieri et ferendo arborem perire et muscum rubrum molestum esse. Hostum vocant quod ex uno facto olei reficitur. Factum dicunt quod uno tempore conficiunt, quem alii CLX aiunt esse modiorum, alii ita minus magnum, ut ad CXX descendat, exinde ut vasa olearia quot et quanta habeant, quibus conficiunt illud. Quod Cato ait circum fundum ulmos et populos, unde frons ovibus et bubus sit et materies, seri oportere (sed hoc neque in omnibus fundis opus est neque, in quibus est opus, propter frondem maxime), sine detrimento ponuntur a septemtrionali parte, quod non officiant soli.

Ille adicit ab eodem scriptore, si locus umectus sit, ibi cacumina populorum serenda et harundinetum. Id prius bipalio verti, ibi oculos harundinis pedes ternos alium ab alio seri, * * * aptam esse utrique eandem fere culturam. Salicem Graecam circum harundinetum seri oportere, uti sit qui vitis alligari possit.

XXV.

Vinea quo in agro serenda sit, sic observandum. Qui locus optimus vino sit et ostentus soli, Aminneum minusculum et geminum eugeneum, helvium

minusculum seri oportere. Qui locus crassior sit aut nebulosus, ibi Aminneum maius aut Murgentinum, Apicium, Lucanum seri. Ceteras vites, et de iis miscellas maxime, in omne genus agri convenire.

XXVI.

In omni vinea diligenter observant ut ridica vitis ad septemtrionem versus tegatur; et si cupressos vivas, pro ridicis quas inserunt, alternos ordines inponunt neque eos crescere altius quam ridicas patiuntur, neque propter eos ut adserant vites, quod inter se haec inimica.

Agrius Fundanio, Vereor, inquit, ne ante aeditumus veniat huc, quam hic ad quartum actum. Vindemiam enim expecto. Bono animo es, inquit Scrofa, ac fiscinas expedi et urnam.

XXVII.

Et quoniam tempora duorum generum sunt, unum annale, quod sol circuitu suo finit, alterum menstruum, quod luna circumiens comprehendit, prius dicam de sole. Eius cursus annalis primum fere circiter ternis mensibus ad fructus est divisus in IIII partis, et idem subtilius sesquimensibus in IIX, in IIII, quod dividitur in ver et aestatem et autumnum et hiemem. Vere sationes quae fiunt, terram rudem proscindere oportet, quae sunt ex ea enata, priusquam ex iis quid seminis cadat, ut sint extradicata; et simul glaebis ab sole percalefactis aptiores facere ad accipiendum imbrem et ad opus faciliores relaxatas; neque eam minus binis arandum, ter melius. Aestate fieri messes oportere, autumnosiccis tempestatibus vindemias, ac silvas excoli commodissime tunc, praecidi arbores oportere secundum terram: radices autem primoribus imbris ut effodiantur, nequid ex iis nasci possit. Hieme putari arbores dumtaxat his temporibus, cum gelu cortices ex imbris careant et glacie.

XXVIII.

Dies primus est veris in aquario, aestatis in tauro, autumnus in leone, hiemis in scorpione. Cum unius cuiusque horum IIII signorum dies tertius et vicesimus IIII temporum sit primus et efficiat ut ver dies habeat XCI, aestas XCIV, autumnus XCI, hiems XXCIX, quae redacta ad dies civiles nostros, qui nunc sunt, primi verni temporis ex a. d. VII id. Febr., aestivi ex a. d. VII id. Mai., autumnalis ex a. d. III id. Sextil., hiberni ex a. d. IV id. Nov., subtilius descriptis temporibus observanda quaedam sunt, eaque in partes VIII dividuntur: primum a favonio ad aequinoctium vernum dies XLV, hinc ad vergiliarum exortum dies XLIV, ab hoc ad solstitium dies XLIIX, inde ad caniculae signum dies XXVII, dein ad aequinoctium autumnale dies LXVII, exin ad vergiliarum occasum dies XXXII, ab hoc ad brumam dies LVII, inde ad favonium dies XLV.

Primo intervallo inter favonium et aequinoctium vernum haec fieri oportet. Seminaria omne genus ut serantur, putari arbusta, stercorari in pratis, circum vites ablacuari, radices quae in summa terra sunt praecidi, prata purgari, salicta seri, segetes sariri. Seges dicitur quod aratum satum est, arvum quod aratum necdum satum est, novalis, ubi satum fuit, antequam secunda aratione novatur rursus. Terram cum primum arant, proscindere appellant, cum iterum, offringere dicunt, quod prima aratione glabrae grandes solent excitari; cum iteratur, offringere vocant. Tertio cum arant iacto semine, boves lirare dicuntur, id est cum tabellis additis ad vomerem simul et satum frumentum operiunt in porcis et sulcant fossas, quo pluvia aqua delabatur. Non nulli postea, qui segetes non tam latas habent, ut in Apulia et id genus praediis, per sartoires occare solent, siquae in porcis relictæ grandiores sunt glabrae. Qua aratrum vomere lacunam striam fecit, sulcus vocatur. Quod est inter duos sulcos elata terra dicitur porca, quod ea seges frumentum porricit. Sic quoque exta deis cum dabant, porricere dicebant.

XXX.

Secundo intervallo inter vernum aequinoctium et vergiliarum exortum haec fieri. Segetes runcari, id est herbam e segetibus expurgari, boves terram proscindere, salicem caedi, prata defendi. Quae superiore tempore fieri oportuerit et non sunt absoluta, antequam gemmas agant ac florescere incipiant, fieri, quod, si quae folia amittere solent ante frondere inceperunt, statim ad serendum idonea non sunt. Oleam seri interputarique oportet.

XXXI.

Tertio intervallo inter vergiliarum exortum et solstitium haec fieri debent. Vineas novellas fodere aut arare et postea occare, id est comminuere, ne sit glabra. Quod ita occidunt, occare dictum. Vites pampinari, sed a sciente (nam id quam putare maius), neque in arbusto, sed in vinea fieri. Pampinare est e sarmento coles qui nati sunt, de iis, qui plurimum valent, primum ac secundum, non numquam etiam tertium, relinquere, reliquos decerpere, ne relictis colibus sarmentum nequeat ministrare sucum. Ideo in vitiario primitus cum exit vitis, tota resicari solet, ut firmiore sarmento e terra exeat atque in pariendis colibus vires habeat maiores. Eiuncidum enim sarmentum propter infirmitatem sterile neque ex se potest eicere vitem, quam vocant minorem flagellum, maiorem et iam unde uvae nascuntur palmam. Prior littera una mutata declinata a venti flatu, similiter ac flabellum flagellum. Posterior, quod ea vitis immittitur ad uvas pariendas, dicta primo videtur a pariendo parilema: exin mutatis litteris, ut in multis, dici coepta palma. Ex altera parte parit capreolum. Is est coliculus viteus intortus, ut cincinnus. hi sunt enim vitis quibus teneat id quo serpit ad locum capiendum, a quo capiendo capreolus

dictus. Omne pabulum, primum ocinum farraginem viciam, novissime faenum, secari. Ocinum dictum a graeco verbo, okeos quod valet cito, similiter quod ocimum in horto. Hoc amplius dictum ocinum, quod citat alvom bubus et ideo iis datur, ut purgentur. Id est ex fabali segete viride sectum, antequam genat siliquas. Farrago contra ex segete ubi sata admixta hordeum et vicia et legumina pabuli causa viride aut quod ferro caesa ferrago dicta, aut inde, quod primum in farracia segete seri coepta. Eo equi et iumenta cetera verno tempore purgantur ac saginantur. Vicia dicta a vinciendo, quod item capreolos habet, ut vitis, quibus, cum susum versus serpit, ad scapum lupini aliumve quem ut haereat, id solet vincere. Si prata inrigua habebis, simulac faenum sustuleris, inrigare. In poma, quae insita erunt, siccitatibus aquam addi cotidie vesperi. A quo, quod indigent potu, poma dicta esse possunt.

XXXII.

Quarto intervallo inter solstitium et caniculam plerique messem faciunt, quod frumentum dicunt quindecim diebus esse in vaginis, quindecim florere, quindecim exarescere, cum sit maturum. Arationes absolvi, quae eo fructuosiores fiunt, quo caldiore terra aratur. Si proscideris, offringi oportet, id est iterare, ut frangantur glabrae; prima enim aratione grandes glabrae ex terra scinduntur. Serendum viciam, lentem, cicerculam, ervilam ceteraque, quae alii legumina, alii, ut Gallicani quidam, legarica appellant, utraque dicta a legendo, quod ea non secantur, sed vellendo leguntur. Vineas veteres iterum occare, novellas etiam tertio, si sunt etiam tum glabrae.

XXXIII.

Quinto intervallo inter caniculam et aequinoctium autumnale oportet stramenta desecari et acervos constitui, arata offringi, frondem caedi, prata inrigua iterum secari.

XXXIV.

Sexto intervallo ab aequinoctio autumnali incipere scribunt oportere serere usque ad diem nonagensimum unum. Post brumam, nisi quae necessaria causa coegerit, non serere, quod tantum intersit, ut ante brumam sata quae septimo die, post brumam sata quadragesimo die vix existant. Neque ante aequinoctium incipi oportere putant, quod, si minus idoneae tempestates sint consecutae, putescere semina soleant. Fabam optime seri in vergiliarum occasu: uvas autem legere et vindemiam facere inter aequinoctium autumnale et vergiliarum occasum; dein vites putare incipere et propagare et serere poma. Haec aliquot regionibus, ubi maturius frigora fiunt asperiora, melius verno tempore.

XXXV.

Septimo intervallo inter vergiliarum occasum et brumam haec fieri oportere dicunt: Serere lilium et crocum. Quae iam egit radicem rosa, ea conciditur radicitus in virgulas palmares et obruitur, haec eadem postea transfertur facta viviradix. Violaria in fundo facere non est utile, ideo quod necesse est terra adruenda pulvinos fieri, quos inrigationes et pluviae tempestates abluunt et agrum faciunt macriorem. A favonio usque ad arcturi exortum recte serpillum e seminario transferri, quod dictum ab eo, quod serpit. Fossas novas fodere, veteres tergere, vineas arbustumque putare, dum in XV diebus ante et post brumam, ut pleraque, ne facias. Nec non tum aliquid recte seritur, ut ulmi.

XXXVI.

Octavo intervallo inter brumam et favonium haec fieri oportet. De segetibus, siqua est aqua, deduci; sin siccitates sunt et terra teneritudinem habet, sarire. Vineas arbustaque putare. Cum in agris opus fieri non potest, quae sub tecto possunt tunc conficienda antelucano tempore hiberno. Quae dixi scripta et proposita habere in villa oportet, maxime ut vilicus norit.

XXXVII.

Dies lunares quoque observandi, qui quodam modo bipertiti, quod a nova luna crescit ad plenam et inde rursus ad novam lunam decrescit, quoad veniat ad intermenstruum, quo die dicitur luna esse extrema et prima; a quo eum diem Athenis appellant enhn kai nean, triakada alii. Quaedam facienda in agris potius crescente luna quam senescente, quaedam contra quae metas, ut frumenta et caeduas silvas. Ego istaec, inquit Agrasius, non solum in ovibus tondendis, sed in meo capillo a patre acceptum servo, ni crescente luna tondens calvos fiam. Agrius, Quem ad modum, inquit, luna quadripartita? Et quid ea divisio ad agros pollet? Tremelius, Numquam rure audisti, inquit, octavo Ianam lunam et crescentem et contra senescentem, et quae crescente luna fieri oporteret, [et] tamen quaedam melius fieri post octavo Ianam lunam quam ante? Et siquae senescente fieri conveniret, melius, quanto minus haberet ignis id astrum? Dixi de quadripartita forma in cultura agri.

Stolo, Est altera, inquit, temporum divisio coniuncta quodam modo cum sole et luna sexpertita, quod omnis fere fructus quinto denique gradu pervenit ad perfectum ac videt in villa dolium ac modium, unde sexto prodit ad usum. Primo praeparandum, secundo serendum, tertio nutricandum, quarto legendum, quinto condendum, sexto promendum. Ad alia in praeparando faciendi scrobes aut repastinandum aut sulcandum, ut si arbustum aut pomarium facere velis; ad alia arandum aut fodiendum, ut si segetes instituas; ad quaedam bipalio vertenda terra plus aut minus. Aliae enim radices angustius diffundunt, ut cupressi, aliae latius, ut platani, usque eo ut Theophrastus scribat Athenis in Lyceo, cum etiam nunc platanus novella esset, radices trium et triginta cubitorum egisse. Quaedam si bubus et aratro proscideris, et iterandum, antequam semen iacias. Item praeparatio siquae fit

in pratis, id est ut defendantur a pastione, quod fere observant a piro florente; si inrigua sunt, ut tempestive inrigentur.

XXXVIII.

Quae loca in agro stercoranda, videndum, et qui et quo genere potissimum facias: nam discrimina eius aliquot. Stercus optimum scribit esse Cassius volucrum praeter palustrium ac nantium. De hisce praestare columbinum, quod sit calidissimum ac fermentare possit terram. Id ut semen aspargi oportere in agro, non ut de pecore acervatim poni. Ego arbitror praestare ex aviariis turdorum ac merularum, quod non solum ad agrum utile, sed etiam ad cibum ita bubus ac subus, ut fiant pingues. Itaque qui aviaria conducunt, si cavet dominus stercus ut in fundo maneat, minoris conducunt, quam ii quibus id accedit. Cassius secundum columbinum scribit esse hominis, tertio caprinum et ovillum et asinum, minime bonum equinum, sed in segetes; in prata enim vel optimum, ut ceterarum veterinarum, quae hordeo pascuntur, quod multam facit herbam. Stercilinum secundum villam facere oportet, ut quam paucissimis operis egeratur. In eo, si in medio robusta aliqua materia sit depacta, negant serpentem nasci.

XXXIX.

Sationis autem gradus, secundus, hanc habet curam: naturam ad quod tempus cuiusque seminis apta sit ad serendum. Nam refert in agro ad quam partem caeli quisque locus spectet, sic ad quod tempus quaeque res facillime crescat. Nonne videmus alia florere verno tempore, alia aestivo, neque eadem autumnali, quae hiberno? Itaque alia seruntur atque inseruntur et metuntur ante aut post quam alia; et cum pleraque vere quam autumno inserantur, circiter solstitium inseri ficos nec non brumalibus diebus cerasos. Quare cum semina sint fere quattuor generum, quae natura dedit, quae transferuntur e terra in terram viva radice, quae ex arboribus dempta demittuntur in humum, quae inseruntur ex arboribus in arbores, de singulis rebus videndum, quae quoque tempore locoque facias.

XL.

Primum semen, quod est principium genendi, id duplex, unum quod latet nostrum sensum, alterum quod apertum. Latet, si sunt semina in aere, ut ait physicos Anaxagoras, et si aqua, quae influit in agrum, inferre solet, ut scribit Theophrastus. Illud quod apparet ad agricolas, id videndum diligenter. Quaedam enim ad genendum propensa usque adeo parva, ut sint obscura, ut cupressi. Non enim galbuli qui nascuntur, id est tamquam pilae parvae corticiae, id semen, sed in iis intus. Primigenia semina dedit natura, reliqua invenit experientia coloni. Prima quae sine colono, priusquam sata, nata; secunda quae ex iis collecta neque, priusquam sata, nata. Prima semina videre

oportet ne vetustate sint exsucta aut ne sint admixta aut ne propter similitudinem sint adulterina. Semen vetus tantum valet in quibusdam rebus, ut naturam commutet. Nam ex semine brassicae vetere sato nasci aiunt rapa et contra ex raporum brassicam. Secunda semina videre oportet ne, unde tollas, nimium cito aut tarde tollas. Tempus enim idoneum, quod scribit Theophrastus, vere et autumnno et caniculae exortu, neque omnibus locis ac generibus idem. In sicco et macro loco et argilloso vernum tempus idoneum, quo minus habet umoris: in terra bona ac pingui autumnno, quod vere multus umor, quam sationem quidam metiuntur fere diebus XXX. Tertium genus seminis, quod ex arbore per surclos defertur in terram, si in humum demittitur, in quibusdam est videndum ut eo tempore sit deplantatum, quo oportet (id fit tum, antequam gemmare aut florere quid incipit); et quae de arbore transferas ut ea deplantes potius quam defringas, quod plantae solum stabilius, quo latius aut radices facilius mittit. Ea celeriter, antequam sucus exarescat, in terram demittunt. In oleagineis seminibus videndum ut sit de tenero ramo ex utraque parte aequabiliter praecisum, quas alii clavolas, alii taleas appellant ac faciunt circiter pedales. Quartum genus seminis, quod transit ex arbore in aliam, videndum qua ex arbore in quam transferatur et quo tempore et quem ad modum obligetur. Non enim pirum recipit quercus, neque enim si malus pirum. Hoc secuntur multi, qui haruspices audiunt multum, a quibus proditum, in singulis arboribus quot genera insita sint, uno ictu tot fulmina fieri illud quod fulmen concepit. Si in pirum silvaticam inserueris pirum quamvis bonam, non fore tam iucundam, quam si in eam quae silvestris non sit. In quamcumque arborem inseras, si eiusdem generis est, dumtaxat ut sit utraque malus, ita inserere oportet referentem ad fructum, meliore genere ut sit surculus, quam est quo veniat arbor. Est altera species ex arbore in arborem inserendi nuper animadversa in arboribus propinquis. Ex arbore, qua vult habere surculum, in eam quam inserere vult ramulum traducit et in eius ramo praeciso ac diffisso implicat, eum locum qui contingit, ex utraque parte quod intro est falce extenuatum, ita ut ex una parti quod caelum visurum est corticem cum cortice exaequatum habeat. Eius ramuli, quem inseret, cacumen ut directum sit ad caelum curat. Postero anno, cum comprehendit, unde propagatum est, ab altera arbore praecidit.

XLI.

Quo tempore quaeque transferas, haec in primis videnda, quae prius verno tempore inserebantur, nunc etiam solstitiali, ut ficus, quod densa materia non est et ideo sequitur caldorem. A quo fit ut in locis frigidis ficeta fieri non possint. Aqua recenti insito inimica: tenellum enim cito facit putre. Itaque caniculae signo commodissime existimatur ea inseri. Quae autem natura minus sunt mollia, vas aliquod supra alligant, unde stillet lente aqua, ne prius exarescat surculus, quam colescat. Cuius surculi corticem integrum servandum et eum sic exacuendum, ut non denudes medullam. Ne extrinsecus imbres noceant aut nimius calor, argilla oblinendum ac libro obligandum.

Itaque vitem triduo antequam inserant desecant, ut qui in ea nimius est umor defluat, antequam inseratur; aut in quam inserunt, in ea paulo infra, quam insitum est, incidunt, qua umor adventicius effluere possit. Contra in fico et malo punica, et siquae etiam horum natura aridiora, continuo. In aliis translationibus videndum ut quod transferat cacumen habeat gemmam, ut in ficis.

De his primis quattuor generibus seminum quaedam quod tardiora, surculis potius utendum, ut in ficetis faciunt. Fici enim semen naturale intus in ea fico, quam edimus, quae sunt minuta grana; e quibus parvis quod enasci coliculi vix queunt — omnia enim minuta et arida ad crescendum tarda, ea quae laxiora, et fecundiora, ut femina quam mas et pro portione in virgultis item; itaque ficus, malus punica et vitis propter femineam mollitiam ad crescendum prona, contra palma et cupressus et olea in crescendo tarda: in hoc enim umidiora quam aridiora — quare ex terra potius in seminariis surculos de ficeto quam grana de fico expedit obruere, praeter si aliter nequeas, ut siquando quis trans mare semina mittere aut inde petere vult. Tum enim resticulam per ficos, quas edimus, maturas perserunt et eas, cum inaruerunt, complicant ac quo volunt mittunt, ubi obrutae in seminario pariant. Sic genera ficorum, Chiae ac Chalcidicae et Lydiae et Africanae, item cetera transmarina in Italiam perlata. Simili de causa, oleae semen cum sit nuculeus, quod ex eo tardius enascebatur colis quam ex aliis, ideo potius in seminariis taleas, quas dixi, serimus.

XLII.

In primis observes ne in terram nimium aridam aut variam, sed temperatam, semen demittas. In iugerum unum, si est natura temperata terra, scribunt opus esse medicae sesquimodium. Id seritur ita, ut semen iaciatur, quem ad modum cum pabulum et frumentum seritur.

XLIII.

Cytisum seritur in terra bene subacta tamquam semen brassicae. Inde differtur et in sesquipedem ponitur, aut etiam de cytiso duriore virgulae deplantantur, et ita pangitur in serendo.

XLIV.

Seruntur fabae modii IIII in iugero, tritici V, hordei VI, farris X, sed non nullis locis paulo amplius aut minus. Si enim locus crassus, plus; si macer, minus. Quare observabis, quantum in ea regione consuetudo erit serendi, ut tantum facias, quod tantum valet regio ac genus terrae, ut ex eodem semine aliubi cum decimo redeat, aliubi cum quinto decimo, ut in Etruria locis aliquot. In Italia in Subaritano dicunt etiam cum centesimo redire solitum, in Syria ad Gadara et in Africa ad Byzacium item ex modio nasci centum. Illud quoque

multum interest, in rudi terra, an in ea seras, quae quotannis obsita sit, quae vocatur restibilis, an in vervacto quae interdum requirit. Cui Agrius, In Olynthia quotannis restibilia esse dicunt, sed ita ut tertio quoque anno uberiores ferant fructos. Licinius, Agrum alternis annis relinqui oportet paulo levioribus sationibus, id est quae minus sugunt terram.

Dicetur, inquit Agrius, de tertio gradu, de nutricationibus atque alimoniis eorum. Ille, Quae nata sunt, inquit, in fundo alescunt, adulta concipiunt, praegnata, cum sunt matura, pariunt poma aut spicam, sic alia. A quo profectum, redit semen. Itaque si florem acerbumve pirum aliudve quid decerpseris, in eodem loco eodem anno nihil renascitur, quod praegnationis idem bis habere non potest. Ut enim mulieres habent ad partum dies certos, sic arbores ac fruges.

XLV.

Primum plerumque e terra exit hordeum diebus VII, nec multo post triticum; legumina fere quadriduo aut quinque diebus, praeterquam faba: ea enim serius aliquanto prodit. Item milium et sesima et cetera similiter aequis fere diebus, praeterquam siquid regio aut tempestas viti attulit, quo minus ita fiat. Quae in seminario nata, si loca erunt frigidiora, quae molli natura sunt, per brumalia tempora tegere oportet fronde aut stramentis. Si erunt imbres secuti, videndum necubi aqua consistat; venenum enim gelum radicibus tenellis. Sub terra et supra virgulta non eodem tempore aequae crescunt; nam radices autumnio aut hieme magis sub terra quam supra alescunt, quod tectae terrae tepore propagantur, supra terram aere frigidior coguntur. Itaque ita esse docent silvestria, ad quae sator non accessit. Nam prius radices, quam ex iis quod solet nasci, crescunt. Neque radices longius procedunt, nisi quo tepor venit solis. Duplex causa radicum, quod et materiem aliam quam aliam longius proicit natura, et quod alia terra alia facilius viam dat.

XLVI.

Propter cuius modi res admiranda discrimina sunt naturae aliquot, ex quibusdam foliis propter eorum versuram, quod sit anni tempus, ut dici possit, ut olea et populus alba et salix. Horum enim folia cum converterunt se, solstitium dicitur fuisse. Nec minus admirandum quod fit in floribus, quos vocant heliotropia ab eo, quod ad solis ortum mane spectant et eius iter ita secuntur ad occasum, ut ad eum semper spectent.

XLVII.

In seminario quae surculis consita et eorum molliora erunt natura cacumina, ut olea ac ficus, ea summa integenda binis tabellis dextra et sinistra deligatis herbaeque eligendae. Eae dum tenerae sunt, vellendae. Post enim aridae factae rixantur ac celerius rumpuntur, quam secuntur. Contra herba in pratis ad spem

faenisiciae nata non modo non evellenda in nutricatu, sed etiam non calcanda. Quo et pecus ab prato ablegandum et omne iumentum, etiam hominem. Solum enim hominis exitium herbae et semitae fundamentum.

XLVIII.

In segetibus autem frumentum quo culmus extulit, spicam. Ea quae mutilata non est, in hordeo et tritico, tria habet continentia, granum, glumam, aristam et etiam, primitus spica cum oritur, vaginam. Granum dictum quod est intimum soldum; gluma qui est folliculus eius; arista quae ut acus tenuis longa eminet e gluma, proinde ut grani apex sit gluma et arista. Arista et granum omnibus fere notum, gluma paucis. Itaque id apud Ennium solum scriptum scio esse in Euhemeri libris versis. Videtur vocabulum etymum habere a glubendo, quod eo folliculo deglubitur granum. Itaque eodem vocabulo appellant fici eius, quam edimus, folliculum. Arista dicta, quod arescit prima. Granum a gerendo; id enim ut gerat spica, seritur frumentum, non ut glumam aut aristam gerat, ut vitis seritur, non ut pampinum ferat, sed ut uvam. Spica autem, quam rustici, ut acceperunt antiquitus, vocant specam, a spe videtur nominata; eam enim quod sperant fore, serunt. Spica mutila dicitur, quae non habet aristam; ea enim quasi cornua sunt spicarum. Quae primitus cum oriuntur neque plane apparent, qua sub latent herba, ea vocatur vagina, ut in qua latet conditum gladium. Illud autem summa in spica iam matura, quod est minus quam granum, vocatur frit; quod in infima spica ad culmum stramenti summum item minus quam granum est, appellatur urru.

XLIX.

Cum conticuisset nec interrogaretur, de nutricatu credens nihil desiderari, Dicam, inquit, de fructibus maturis capiendis. Primum de pratis summissis herba, cum crescere desiit et aestu arescit, subsecari falcibus debet et, quaad perarescat, furcillis versari; cum peraruit, de his manipulos fieri ac vehi ad villam; tum de pratis stipulam rastellis eradi atque addere faenisiciae cumulum. Quo facto sicilienda prata, id est falcibus consecanda quae faenisices praeterierunt ac quasi herba tuberosum reliquerunt campum. A qua sectione arbitror dictum sicilire pratum.

L.

Messis proprio nomine dicitur in iis quae metimur, maxime in frumento, et ab eo esse vocabulo declinata. Frumenti tria genera sunt messionis, unum, ut in Umbria, ubi falce secundum terram succidunt stramentum et manipulum, ut quemque subsicuerunt, ponunt in terra. Ubi eos fecerunt multos, iterum eos percensent ac de singulis secant inter spicas et stramentum. Spicas coiciunt in corbem atque in aream mittunt, stramenta relinunt in segete, unde tollantur in acervum. Altero modo metunt, ut in Piceno, ubi ligneum habent incurvum

bacillum, in quo sit extremo serrula ferrea. Haec cum comprehendit fascem spicarum, desecat et stramenta stantia in segeti relinquit, ut postea subsecentur. Tertio modo metitur, ut sub urbe Roma et locis plerisque, ut stramentum medium subsicent, quod manu sinistra summum prendunt; a quo medio messem dictam puto. Infra manum stramentum cum terra haeret, postea subsecatur; contra quod cum spica stramentum haeret, corbibus in aream deferitur. Ibi discedit in aperto loco palam: a quo potest nominata esse palea. Alii stramentum ab stando, ut st[r]amen, dictum putant; alii ab stratu, quod id substernatur pecori. Cum est matura seges, metendum, cum in ea [in] iugerum fere una opera propemodum in facili agro satis esse dicatur. Messas spicas corbibus in aream deferre debent.

LI.

Aream esse oportet in agro sublimiori loco, quam perflare possit ventus; hanc esse modicam pro magnitudine segetis, potissimum rutundam et mediam paulo extumidam, ut, si pluerit, non consistat aqua et quam brevissimo itinere extra aream defluere possit; omne porro brevissimum in rutundo e medio ad extremum. Solida terra pavita, maxime si est argilla, ne, aestu peminosa si sit, in rimis eius grana oblitescant et recipiant aquam et ostia aperiant muribus ac formicis. Itaque amurca solent perfundere, ea enim herbarum et formicarum et talparum venenum. Quidam aream ut habeant soldam, muniunt lapide aut etiam faciunt pavimentum. Non nulli etiam tegunt areas, ut in Bagiennis, quod ibi saepe id temporis anni oriuntur nimbi. Ubi ea resecta et loca calda, prope aream faciundum umbracula, quo succedant homines in aestu tempore meridiano.

LII.

Quae seges grandissima atque optima fuerit, seorsum in aream secerni oportet spicas, ut semen optimum habeat; e spicis in area excuti grana. Quod fit apud alios iumentis iunctis ac tribulo. Id fit e tabula lapidibus aut ferro asperata, quae cum imposito auriga aut pondere grandi trahitur iumentis iunctis, discutit e spica grana; aut ex axibus dentatis cum orbiculis, quod vocant plostellum poenicum; in eo quis sedeat atque agitet quae trahant iumenta, ut in Hispania citeriore et aliis locis faciunt. Apud alios exteritur grege iumentorum inacto et ibi agitato perticis, quod ungulis e spica exteruntur grana. Iis tritis oportet e terra subiectari vallis aut ventilabris, cum ventus spirat lenis. Ita fit ut quod levissimum est in eo atque appellatur acus ac palea evannatur foras extra aream ac frumentum, quod est ponderosum, purum veniat ad corbem.

LIII.

Messi facta spicilegium venire oportet aut domi legere stipulam aut, si sunt spicae raras et operae carae, compasci. Summa enim spectanda, ne in ea re

sumptus fructum superet.

LIV.

In vinetis uva cum erit matura, vindemiam ita fieri oportet, ut videas, a quo genere uvarum et a quo loco vineti incipias legere. Nam et praecox et miscella, quam vocant nigram, multo ante coquitur, quo prior legenda, et quae pars arbusti ac vineae magis aprica, prius debet descendere de vite. In vindemia diligentis uva non solum legitur sed etiam eligitur; legitur ad bibendum, eligitur ad edendum. Itaque lecta defertur in forum vinarium, unde in dolium inane veniat; electa in secretam corbulam, unde in ollulas addatur et in dolia plena vinaciorum contrudatur, alia quae in piscinam in amphoram picatam descendat, alia quae in aream in carnarium escendat. Quae calcatae uvae erunt, earum scopi cum folliculis subiciendi sub prelum, ut, siquid reliqui habeant musti, exprimatur in eundem lacum. Cum desiit sub prelo fluere, quidam circumcidunt extrema et rursus premunt et, rursus cum expressum, circumciscium appellant ac seorsum quod expressum est servant, quod resipit ferrum. Expressi acinorum folliculi in dolia coiciuntur, eoque aqua additur; ea vocatur lora, quod lota acina, ac pro vino operariis datur hieme.

LV.

De oliveto oleam, quam manu tangere possis e terra ac scalis, legere oportet potius quam quaterere, quod ea quae vapulavit macescit nec dat tantum olei. Quae manu stricta, melior ea quae digitis nudis, quam illa quae cum digitabulis, durities enim eorum quod non solum stringit bacam, sed etiam ramos glubit ac relinquit ad gelicidium resectos. Quae manu tangi non poterunt, ita quati debent, ut harundine potius quam pertica feriantur; gravior enim plaga medicum quaerit. Qui quatiet, ne adversam caedat; saepe enim ita percussa olea secum defert de ramulo plantam, quo facto fructum amittunt posteri anni. Nec haec non minima causa, quod oliveta dicant alternis annis non ferre fructus aut non aequae magnos. Olea ut uva per idem bivium redit in villam, alia ad cibum, alia ut eliquescat ac non solum corpus intus unguat sed etiam extrinsecus. Itaque dominum et balneas et gymnasium sequitur. Haec, de qua fit oleum, congeri solet acervatim in dies singulos in tabulata, ut ibi mediocriter fracescat ac primus quisque acervos demittatur per serias ac vasa olearia ad trapetas, quae res molae oleariae ex duro et aspero lapide. Olea lecta si nimium diu fuit in acervis, caldore fracescit et oleum foetidum fit. Itaque si nequeas mature conficere, in acervis iactando ventilare oportet. Ex olea fructus duplex: oleum, quod omnibus notum, et amurca, cuius utilitatem quod ignorant plerique, licet videre e torculis oleariis fluere in agros ac non solum denigrare terram, sed multitudine facere sterilem; cum is umor modicus cum ad multas res tum ad agri culturam pertineat vehementer, quod circum arborum radices infundi solet, maxime ad oleam, et ubicumque in agro herba

LVI.

Agrius, Iamdudum, inquit, in villa sedens expecto cum clavi te, Stolo, dum fructus in villam referas. Ille, Em quin adsum, venio, inquit, ad limen, fores aperi. Primum faenisiciae conduntur melius sub tecto quam in acervis, quod ita fit iucundius pabulum. Ex eo intellegitur, quod pecus utroque posito libentius est.

LVII.

Triticum condi oportet in granaria sublimia, quae perflentur vento ab exortu ac septemtrionum regione, ad quae nulla aura umida ex propinquis locis adspiret. Parietes et solum opere tectorio marmorato loricandi; si minus, ex argilla mixta acere e frumento et amurca, quod murem et vermem non patitur esse et grana facit solidiora ac firmiora. Quidam ipsum triticum conspargunt, cum addant in circiter mille modium quadrantal amurcae. Item alius aliut adfriat aut aspargit, ut Chalcidicam aut Caricam cretam aut absinthium, item huius generis alia. Quidam granaria habent sub terris speluncas, quas vocant sirus, ut in Cappadocia ac Thracia; alii, ut in agro Carthaginensi et Oscensi in Hispania citeriore, puteos. Horum solum paleis substernunt et curant ne umor aut aer tangere possit, nisi cum promitur ad usum; quo enim spiritus non pervenit, ibi non oritur curculio. Sic conditum triticum manet vel annos L, milium vero plus annos C. Supra terram granaria in agro quidam sublimia faciunt, ut in Hispania citeriore et in Apulia quidam, quae non solum a lateribus per fenestras, sed etiam subtus a solo ventus refrigerare possit. Faba et legumina in oleariis vasis oblita cinere perdiu incolumia servantur.

LVIII.

Cato ait uvam Aminneam minusculam et maiorem et Apiciam in ollis commodissime condi; eadem in sapa et musto recte; quas suspendas opportunissimas esse duracinas et Aminneas.

LIX.

De pomis conditiva, mala struthea, cotonea, Scantiana, Scaudiana, orbiculata et quae antea mustea vocabant, nunc melimela appellant, haec omnia in loco arido et frigido supra paleas posita servari recte putant. Et ideo oporothecas qui faciunt, ad aquilonem ut fenestras habeant atque ut eae perflentur curant, neque tamen sine foriculis, ne, cum umorem amiserint, pertinaci vento vieta fiant; ideoque in iis camaras marmorato et parietes pavimentaue faciunt, quo frigidius sit. In quo etiam quidam triclinium sternere solent cenandi causa. Etenim in quibus luxuria concesserit ut in pinacotheca faciant, quod spectaculum datur ab arte, cur non quod natura datum utantur in venustate

disposita pomorum? Praesertim cum id non sit faciendum, quod quidam fecerunt, ut Romae coempta poma rus intulerint in oporothecen instruendam convivi causa. In oporotheca mala manere putant satis commode alii in tabulis in opere marmorato, alii substrata palea vel etiam floccis; mala punica demissis suis surculis in dolio harenae, mala cotonea struthea in pensilibus iunctis; contra in sapa condita manere pira Aniciana sementiva; sorba quidam dissecta et in sole macerata, ut pira; et sorba per se, ubicumque sint posita in arido, facile durare: servare rapa consecata in sinape, nuces iugulandis in harena. Punica mala et in harena iam decerpta ac matura et etiam immatura, cum haereant in sua virga et demiseris in ollam sine fundo, eaque si coieceris in terram et obleris circum ramum, ne extrinsecus spiritus adflet, ea non modo integra eximi, sed etiam maiora, quam in arbore umquam pependerint.

LX.

De olivitate oleas esui optime condi scribit Cato orcites et puseas vel virides in muria vel in lentisco contusas. Orcites nigras aridas, sale si sint confriatae dies quinque et tum sale excusso biduum si in sole positae fuerint, manere idoneas solere: easdem sine sale in defrutum condi recte.

LXI.

Amurcam periti agricolae tam in doleis conduunt quam oleum aut vinum. Eius conditio: cum expressa effluxit, quod statim de ea decoquuntur duae partes et refrigeratum conditur in vasa. Sunt item aliae conditiones, ut ea in qua adicitur mustum.

LXII.

Quod nemo fructus condit, nisi ut promat, de eo quoque vel sexto gradu animadvertenda pauca. Promunt condita aut propterea quod sunt tuenda, aut quod utenda, aut quod vendunda. Ea quod dissimilia sunt inter se, aliut alio tempore tuendum et utendum.

LXIII.

Tuendi causa promendum id frumentum, quod curculiones exesse incipiunt. Id enim cum promptum est, in sole ponere oportet aquae catinos, quod eo conveniunt, ut ipsi se necent, curculiones. Sub terra qui habent frumentum in iis quos vocant sirus, quod cum periculo introitur recenti apertione, ita ut quibusdam sit interclusa anima, aliquanto post promere, quam aperueris, oportet. Far, quod in spicis condideris per messem et ad usus cibatus expedire velis, promendum hieme, ut in pistrino pisetur ac torreatur.

LXIV.

Amurca cum ex olea expressa, qui est umor aquatilis, ac retrimentum conditum in vas fictile. Id quidam sic solent tueri; diebus XV in eo quod est levissimum ac summum deflatum ut traiciant in alia vasa, et hoc isdem intervallis duodeciens sex mensibus proximis item faciant; cum id novissime, potissimum traiciant, cum senescit luna. Tum decocunt in ahenis leni igni, ad duas partes quoad redegerunt. Tum denique ad usum recte promitur.

LXV.

Quod mustum conditur in dolium, ut habeamus vinum, non promendum dum fervet, neque etiam cum processit ita, ut sit vinum factum. Si vetus bibere velis, quod non fit, antequam accesserit annus; anniculum prodit. Si est vero ex eo genere uvae, quod mature coacescat, ante vindemiam consumi aut venire oportet. Genera sunt vini, in quo Falerna, quae quanto pluris annos condita habuerunt, tanto, cum prompta, sunt fructuosiora.

LXVI.

Oleas albas quas condideris, novas si celeriter promas, propter amaritudinem respuit palatum; item nigras, nisi prius eas sale maceraris, ut libenter in os recipiantur.

LXVII.

Nucem iuglandem et palmulam et ficum Sabinam quanto citius promas, iucundiore utare, quod vetustate ficus fit pallidior, palmula cariosior, nux aridior.

LXVIII.

Pensilia, ut uvae, mala et sorba, ipsa ostendunt, quando ad usum oporteat promi, quod colore mutato et contractu acinorum, si non dempseris ad edendum, ad abiciendum descensurum se minitantur. Sorbum maturum mite conditum citius promi oportet; acerbum enim suspensum lentius est, quod prius domi maturitatem adsequi vult, quam nequit in arbore, quam mitescat.

LXIX.

Messum far promendum hieme in pistrino ad torrendum, quod ad cibatum expeditum esse velis; quod ad sationem, tum promendum, cum segetes maturae sunt ad accipiendum. Item quae pertinent ad sationem, suo quoque tempore promenda. Quae vendenda, videndum quae quoque tempore oporteat promi; alia enim, quae manere non possunt, antequam se commutent, ut celeriter promas ac vendas; alia, quae servari possunt, ut tum vendas, cum caritas est. Saepe enim diutius servata non modo usuram adiciunt, sed etiam fructum duplicant, si tempore promas.

Cum haec diceret, venit libertus aeditumi ad nos flens et rogat ut ignoscamus, quod simus retenti, et ut ei in funus postridie prodeamus. Omnes consurgimus ac simul exclamamus, 'Quid? in funus? quod funus? quid est factum?' Ille flens narrat ab nescio quo percussum cultello concidisse, quem qui esset animadvertere in turba non potuisse, sed tantum modo exaudisse vocem, perperam fecisse. Ipse cum patronum domum sustulisset et pueros dimisisset, ut medicum requirerent ac mature adducerent, quod potius illut administrasset, quam ad nos venisset, aecum esse sibi ignosci. Nec si eum servare non potuisset, quin non multo post animam efflaret, tamen putare se fecisse recte. Non moleste ferentes descendimus de aede et de casu humano magis querentes, quam admirantes id Romae factum, discedimus omnes.

LIBER II

Viri magni nostri maiores non sine causa praeponerent rusticos Romanos urbanis. Ut ruri enim qui in villa vivunt ignaviores, quam qui in agro versantur in aliquo opere faciendo, sic qui in oppido sederent, quam qui rura colerent, desidiosiores putabant. Itaque annum ita diviserunt, ut nonis modo diebus urbanas res usurparent, reliquis septem ut rura colerent. Quod dum servaverunt institutum, utrumque sunt consecuti, ut et cultura agros fecundissimos haberent et ipsi valetudine firmiores essent, ac ne Graecorum urbana desiderarent gymnasia. Quae nunc vix satis singula sunt, nec putant se habere villam, si non multis vocabulis retinniat Graecis, quom vocent particulatim loca, procoetona, palaestram, apodyterion, peristylon, ornithona, peripteron, oporothecen. Igitur quod nunc intra murum fere patres familiae correperunt relictis falce et aratro et manus movere maluerunt in theatro ac circo, quam in segetibus ac vinetis, frumentum locamus qui nobis advehat, qui saturi fiamus ex Africa et Sardinia, et navibus vindemiam condimus ex insula Coa et Chia.

Itaque in qua terra culturam agri docuerunt pastores progeniem suam, qui condiderunt urbem, ibi contra progenies eorum propter avaritiam contra leges ex segetibus fecit prata, ignorantes non idem esse agri culturam et pastionem. Alius enim opilio et arator, nec, si possunt in agro pasci armenta, armentarius non aliud ac bubulcus. Armentum enim id quod in agro natum non creat, sed tollit dentibus; contra bos domitus causa fit ut commodius nascatur frumentum in segete et pabulum in novali. Alia, inquam, ratio ac scientia coloni, alia pastoris: coloni ea quae agri cultura factum ut nascerentur e terra, contra pastoris ea quae nata e pecore. Quarum quoniam societas inter se magna, propterea quod pabulum in fundo compascere quam vendere plerumque magis expedit domino fundi et stercoratio ad fructus terrestres aptissima et maxime ad id pecus appositum, qui habet praedium, habere utramque debet disciplinam, et agri culturae et pecoris pascendi, et etiam villaticae pastionis. Ex ea enim quoque fructus tolli possunt non mediocres ex ornithonibus et leporariis et piscinis. E quis quoniam de agri cultura librum Fundaniae uxori propter eius fundum feci, tibi, Niger Turrani noster, qui vehementer delectaris pecore, propterea quod te empturientem in campos Macros ad mercatum adducunt crebro pedes, quo facilius sumptibus multa poscentibus ministres, quod eo facilius faciam, quod et ipse pecuarias habui grandes, in Apulia oviarias et in Reatino equarias, de re pecuaria breviter ac summatim percurram ex sermonibus nostris collatis cum iis qui pecuarias habuerunt in Epiro magnas, tum cum piratico bello inter Delum et Siciliam Graeciae classibus praeessem. Incipiam hinc * * *

Cum Menates discessisset, Cossinius mihi, Nos te non dimittemus, inquit, antequam illa tria explicaris, quae coeperas nuper dicere, cum sumus interpellati. Quae tria? inquit Murrius, an ea quae mihi here dixisti de pastoricia re? Ista, inquit ille, quae coeperat hic disserere, quae esset origo, quae dignitas, quae ars * * * Ego vero, inquam, dicam dumtaxat quod est historicon, de duabus rebus primis quae accepi, de origine et dignitate, de tertia parte, ubi est de arte, Scrofa suscipiet, ut semigraecis pastoribus dicam graece, hos per mou pollon ameinon. Nam is magister C. Lucili Hirri, generi tui, cuius nobiles pecuariae in Brutiis habentur. Sed haec ita a nobis accipietis, inquit Scrofa, ut vos, qui estis Epirotici pecuariae athletae, remuneremini nos ac quae scitis proferatis in medium; nemo enim omnia potest scire. Cum accepissem condicionem et meae partes essent primae, non quo non ego pecuarias in Italia habeam, sed non omnes qui habent citharam sunt citharoedi: Igitur, inquam, et homines et pecudes cum semper fuisse sit necesse natura — sive enim aliquod fuit principium generandi animalium, ut putavit Thales Milesius et Zeno Citieus, sive contra principium horum exstitit nullum, ut credidit Pythagoras Samius et Aristoteles Stagerites — necesse est humanae vitae ab summa memoria gradatim descendisse ad hanc aetatem, ut scribit Dicaearchus, et summum gradum fuisse naturalem, cum viverent homines ex his rebus, quae inviolata ultro ferret terra, ex hac vita in secundam descendisse pastoriciam, e feris atque agrestibus ut arboribus ac virgultis decerpendo glandem, arbutum, mora, poma colligerent ad usum, sic ex animalibus cum propter eandem utilitatem, quae possent, silvestria deprenderent ac concluderent et mansuescerent. In quis primum non sine causa putant oves assumptas et propter utilitatem et propter placiditatem; maxime enim hae natura quietae et aptissimae ad vitam hominum. Ad cibum enim lacte et caseum adhibitum, ad corpus vestitum et pelles adtulerunt. Tertio denique gradu a vita pastoralis ad agri culturam descenderunt, in qua ex duobus gradibus superioribus retinuerunt multa, et quo descenderant, ibi processerunt longe, dum ad nos perveniret. Etiam nunc in locis multis genere pecudum ferarum sunt aliquot, ab ovibus, ut in Phrygia, ubi greges videntur complures, in Samothrace caprarum, quas Latine rotas appellant. Sunt enim in Italia circum Fiscellum et Tetricam montes multae. De subus nemini ignotum, nisi qui apros non putat sues vocari. Boves perferi etiam nunc sunt multi in Dardania et Maedica et Thracia, asini feri in Phrygia et Lycaonia, equi feri in Hispania citeriore regionibus aliquot.

Origo, quam dixi; dignitas, quam dicam. De antiquis illustrissimus quisque pastor erat, ut ostendit et Graeca et Latina lingua et veteres poetae, qui alios vocant polyarnas, alios polymelos, alios polybutas; qui ipsas pecudes propter caritatem aureas habuisse pelles tradiderunt, ut Argis, Atreus quam sibi Thyesten subduxe queritur; ut in Colchide ad Aeetam, ad cuius arietis pellem profecti regio genere dicuntur Argonautae; ut in Libya ad Hesperidas, unde aurea mala, id est secundum antiquam consuetudinem capras et oves, Hercules ex Africa in Graeciam exportavit. Ea enim a sua voce Graeci

appellarunt mela. Nec multo secus nostri ab eadem voce, sed ab alia littera (vox earum non me, sed be sonare uidetur), oves belare vocem efferentes, e quo post balare dicunt extrita littera, ut in multis. Quod si apud antiquos non magnae dignitatis pecus esset, in caelo describendo astrologi non appellassent eorum vocabulis signa, quae non modo non dubitarunt ponere, sed etiam ab iis principibus duodecim signa multi numerant, ab ariete et tauro, cum ea praeponerent Apollini et Herculi. Ii enim dei ea secuntur, sed appellantur Gemini. Nec satis putarunt de duodecim signis sextam partem obtinere pecudum nomina, nisi adiecissent, ut quartam tenerent, capricornum. Praeterea a pecuariis addiderunt capram, haedos, canes. An non etiam item in mari terraque ab his regionibus notae, in mari, quod nominaverunt a capris Aegaeum pelagus, ad Syriam montem Taurum, in Sabinis Cantherium montem, Bosporum unum Thracium, alterum Cimmerium? Nonne in terris multa, ut oppidum in Graecia Hippion Argos? Denique non Italia a vitulis, ut scribit Piso? Romanorum vero populum a pastoribus esse ortum quis non dicit? Quis Faustulum nescit pastorem fuisse nutricium, qui Romulum et Remum educavit? Non ipsos quoque fuisse pastores obtinebit, quod Parilibus potissimum condidere urbem? Non idem, quod multa etiam nunc ex vetere instituto bubus et ovibus dicitur, et quod aes antiquissimum quod est flatum pecore est notatum, et quod, urbs cum condita est, tauro et vacca qua essent muri et portae definitum, et quod, populus Romanus cum lustratur suovitautilibus, circumaguntur verres aries taurus, et quod nomina multa hebemus ab utroque pecore, a maiore et a minore — a minore Porcius, Ovinus, Caprilus; sic a maiore Equitius, Taurius, Asinius — et idem cognomina adsignificare quod dicuntur, ut Anni Caprae, Statili Tauri, Pomponi Vituli, sic a pecudibus alia multa?

Relicum est de scientia pastoralis, de qua est dicendum, quod Scrofa noster, cui haec aetas defert rerum rusticarum omnium palmam, quo melius potest, dicet. Cum convertissent in eum ora omnes, Scrofa, Igitur, inquit, est scientia pecoris parandi ac pascendi, ut fructus quam possint maximi capiantur ex eo, a quibus ipsa pecunia nominata est; nam omnis pecuniae pecus fundamentum. Ea partes habet novem, discretas ter ternas, ut sit una de minoribus pecudibus, cuius genera tria, oves capra sus, altera de pecore maiore, in quo sunt item ad tres species natura discreti, boves asini equi. Tertia pars est in pecuaria quae non parantur, ut ex iis capiatur fructus, sed propter eam aut ex ea sunt, muli canes pastores. Harum una quaeque in se generalis partis habet minimum novenas, quarum in pecore parando necessariae quattuor, alterae in pascendo totidem; praeterea communis una. Ita fiunt omnium partes minimum octoginta et una, et quidem necessariae nec parvae. Primum ut bonum pares pecus, unum scire oportet, qua aetate quamque pecudem parare habereque expediat. Itaque in bubulo pecore minoris emitur annicula et supra decem annorum, quod a bima aut trima fructum ferre incipit neque longius post decimum annum procedit. Nam prima aetas omnis pecoris et extrema sterilis. E quattuor primis altera pars est cognitio formae unius cuiusque pecudis, qualis sit.

Magni enim interest, cuius modi quaeque sit ad fructum. Ita potius bovem emunt cornibus nigrantibus quam albis, capram amplam quam parvam, sues procero corpore, capitibus ut sint parvis. Tertia pars est, quo sit seminio quaerendum. Hoc nomine enim asini Arcadici in Graecia nobilitati, in Italia Reatini, usque eo ut mea memoria asinus venierit sestertiis milibus sexaginta et unae quadrigae Romae constiterint quadringentis milibus. Quarta pars est de iure in parando, quem ad modum quamque pecudem emi oporteat civili iure. Quod enim alterius fuit, id ut fiat meum, necesse est aliquid intercedere, neque in omnibus satis est stipulatio aut solutio nummorum ad mutationem domini. In emptione alias stipulandum sanum esse, alias e sano pecore, alias neutrum.

Alterae partes quattuor sunt, cum iam emeris, observandae, de pastione, de fetura, de nutricatu, de sanitate. Pascendi primus locus qui est, eius ratio triplex, in qua regione quamque potissimum pascas et quando et qui, ut capras in montuosis potius locis fruticibus quam in herbidis campis, equas contra. Neque eadem loca aestiva et hiberna idonea omnibus ad pascendum. Itaque greges ovium longe abiguntur ex Apulia in Samnium aestiuatum atque ad publicanum profitentur, ne, si inscriptum pecus paverint, lege censoria committant. Muli e Rosea campestri aestate exiguntur in Burbures altos montes. Qui potissimum quaeque pecudum pascatur, habenda ratio, nec solum quod faeno fit satura equa aut bos, cum sues hoc vitent et quaerant glandem, sed quod hordeum et faba interdum sit quibusdam obiciendum et dandum bubus lupinum et lactariis medica et cytisum; praeterea quod ante admissuram diebus triginta arietibus ac tauris datur plus cibi, ut vires habeant, feminis bubus demitur, quod macescentes melius concipere dicuntur. Secunda pars est de fetura. Nunc appello feturam a conceptu ad partum; hi enim praegnationis primi et extremi fines. Quare primum videndum de admissione, quo quaeque tempore ut ineant facere oporteat. Nam ut suillo pecori a favonio ad aequinoctium vernum putant aptum, sic ovillo ab arcturi occasu usque ad aquilae occasum. Praeterea habenda ratio, quanto antequam incipiat admissura fieri mares a feminis secretos habeant, quod fere in omnibus binis mensibus ante faciunt et armentarii et opiliones. Altera pars est, in fetura quae sint observanda, quod alia alio tempore parere solet. Equa enim ventrem fert duodecim menses, vacca decem, ovis et capra quinos, sus quattuor. In fetura res incredibilis est in Hispania, sed est vera, quod in Lusitania ad oceanum in ea regione, ubi est oppidum Olisipo, monte Tagro quaedam e vento concipiunt certo tempore equae, ut his gallinae quoque solent, quarum ova hypenemia appellant. Sed ex his equis qui nati pulli, non plus triennium vivunt. Quae nata sunt matura et corda, ut pure et molliter stent videndum et ne obterantur. Dicuntur agni cordi, qui post tempus nascuntur ac remanserunt in volvis intimis * * * vocant chorion, a quo cordi appellati. Tertia res est, in nutricatu quae observari oporteat, in quo quot diebus matris sugant mammam et id quo tempore et ubi; et si parum habet lactis mater, ut subiciat sub alterius mammam, qui appellantur subrumi, id est sub mamma. Antiquo enim

vocabulo mamma rumis, ut opinor. Fere ad quattuor menses a mamma non diiunguntur agni, haedi tres, porci duo. E quis qui iam puri sunt ad sacrificium, ut immolentur, olim appellati sacres, quos appellat Plautus cum ait “quanti sunt porci sacres?” Sic boves atiles ad sacrificia publica saginati dicuntur opimi. Quarta pars est de sanitate, res multiplex ac necessaria, quod morbosum pecus est vitiosum, et quoniam non valet, saepe magna adficiuntur calamitate. Cuius scientiae genera duo, ut in homine, unum ad quae adhibendi medici, alterum quae ipse etiam pastor diligens mederi possit. Eius partes sunt tres. Nam animadvertendum, quae cuiusque morbi sit causa, quaeque signa earum causarum sint, et quae quemque morbum ratio curandi sequi debeat. Fere morborum causae erunt, quod laborant propter aestus aut propter frigora, nec non etiam propter nimium laborem aut contra nullam exercitationem, aut si, cum exercueris, statim sine intervallo cibum aut potionem dederis. Signa autem sunt, ut eorum qui e labore febrem habent adapertum os umido spiritu crebro et corpore calido. Curatio autem, cum hic est morbus, haec: perfunditur aqua et perungitur oleo et vino tepefacto, et item cibo sustinetur, et inicitur aliquid, ne frigus laedat; sitiendi aqua tepida datur. Si hoc genus rebus non proficitur, demittitur sanguis, maxime e capite. Item ad alios morbos aliae causae et alia signa, in omni pecore quae scripta habere oportet magistrum pecoris.

Relinquitur nonum quod dixi, de numero, utriusque partis commune. Nam et qui parat pecus necesse est constituat numerum, quot greges et quantos sit pasturus, ne aut saltus desint aut supersint et ideo fructus dispereant. Praeterea scire oportet, in grege quot feminas habeat, quae parere possint, quot arietes, quot utriusque generis suboles, quot reiculae sint alienandae. In alimoniis, si sunt plures nati, uti quidam faciunt, sequendum ut quosdam subducas, quae res facere solet ut reliqui melius crescant.

Vide, inquit Atticus, ne te fallat et novenae istae partes non exeant extra pecoris minoris ac maioris nomen. Quo pacto enim erunt in mulis et pastoribus novenae partes, ubi nec admissurae nec feturae observantur? In canibus enim video posse dici. Sed do etiam in hominibus posse novenarium retineri numerum, quod in hibernis habent in villis mulieres, quidam etiam in aestivis, et id pertinere putant, quo facilius ad greges pastores retineant, et puerperio familiam faciunt maiorem et rem pecuariam fructuosiore. Sic, inquam, numerus non est ut sit ad amussim, ut non est, cum dicimus mille naves isse ad Troiam, centumvirale esse iudicium Romae. Quare deme, si vis, duas res de mulis, admissuram et parturam. Vaccius, parturam? inquit, proinde ut non aliquotiens dicatur Romae peperisse mulam. Cui ego ut succinerem, subicio Magonem et Dionysium scribere, mula et equa cum conceperint, duodecimo mense parere. Quare non, si hic in Italia cum peperit mula sit portentum, adsentiri omnes terras. Neque enim hirundines et ciconiae, quae in Italia pariunt, in omnibus terris pariunt. Non scitis palmulas careotas Syrias parere in Iudaea, in Italia non posse? Sed Scrofa, Si exigere mavis sine mulorum fetura et nutricatu numerum octoginta et unum, est qui expleas

duplicem istam lacunam, quod extraordinariae fructum species duae accedunt magnae, quarum una est tonsura, quod oves ac capras detondent aut uellunt; altera, quae latius patet, de lacte et caseo, quam scriptores Graeci separatim tyropoian appellaverunt ac scripserunt de ea re permulta.

II.

Sed quoniam nos nostrum pensum absolvimus ac limitata est pecuaria quaestio, nunc rursus vos reddite nobis, o Epirotae, de una quaque re, ut videamus, quid pastores a Pergamide Maledove potis sint. Atticus, qui tunc Titus Pomponius, nunc Quintus Caecilius cognomine eodem, Ego opinor, inquit, incipiam primus, quoniam in me videre coniecisse oculos, et dicam de primigenia pecuaria. E feris enim pecudibus primum dicis oves comprehensas ab hominibus ac mansuefactas. Has primum oportet bonas emere, quae ita ab aetate, si neque vetulae sunt neque merae agnae, quod alterae nondum, alterae iam non possunt dare fructum. Sed ea melior aetas, quam sequitur spes, quam ea quam mors. De forma ovem esse oportet corpore amplo, quae lana multa sit et molli, villis altis et densis toto corpore, maxime circum cervicem et collum, ventrem quoque ut habeat pilosum. Itaque quae id non habent, maiores nostri apicas appellabant ac reiciebant. Esse oportet cruribus humilibus; caudis observate ut sint in Italia prolixis, in Syria brevibus. In primis videndum ut boni seminis pecus habeas. Id fere ex duabus rebus potest animadverti, ex forma et progenie: ex forma, si arietes sint fronte lana vestiti bene, tortis cornibus pronis ad rostrum, ravis oculis, lana opertis auribus, ampli, pectore et scapulis et clunibus latis, cauda lata et longa. Animadvertendum quoque lingua ne nigra aut varia sit, quod fere qui eam habent nigros aut varios procreant agnos. Ex progenie autem animadvertitur, si agnos procreant formosos. In emptionibus iure utimur eo, quo lex praescripsit. In ea enim alii plura, alii pauciora excipiunt; quidam enim pretio facto in singulas oves, ut agni cordi duo pro una ove adnumerentur, et si quoi vetustate dentes absunt, item binae pro singulis ut procedant. De reliquo antiqua fere formula utuntur. Cum emptor dixit “tanti sunt mi emptae?” Et ille respondit “sunt” et expromisit nummos, emptor stipulatur prisca formula sic, “illasce oves, qua de re agitur, sanas recte esse, uti pecus ovillum, quod recte sanum est extra luscam surdam minam, id est ventre glabro, neque de pecore morbooso esse habereque recte licere, haec sic recte fieri spondesne?” Cum id factum est, tamen grex dominum non mutavit, nisi si est adnumeratum; nec non emptor pote ex empto vendito illum damnare, si non tradet, quamvis non solverit nummos, ut ille emptorem simili iudicio, si non reddit pretium.

De alteris quattuor rebus deinceps dicam, de pastione, fetura, nutritu, sanitate. Primum providendum ut totum annum recte pascantur intus et foris; stabula idoneo loco ut sint, ne ventosa, quae spectent magis ad orientem quam ad meridianum tempus. Ubi stent, solum oportet esse eruderatum et proclivum, ut everri facile possit ac fieri purum. Non enim solum ea uligo

lanam corrumpit ovium, sed etiam ungulas, ac scabras fieri cogit. Cum aliquot dies steterunt, subicere oportet virgulta alia, quo mollius requiescant purioresque sint; libentius enim ita pascuntur. Faciendum quoque saepta secreta ab aliis, quo incientes secludere possis, item quo corpore aegro. Haec magis ad villaticos greges animaduertenda. Contra illae in saltibus quae pascuntur et a tectis absunt longe, portant secum crates aut retia, quibus cohortes in solitudine faciant, ceteraque utensilia. Longe enim et late in diversis locis pasci solent, ut multa milia absint saepe hibernae pastiones ab aestivis. Ego vero scio, inquam; nam mihi greges in Apulia hibernabant, qui in Reatinis montibus aestivabant, cum inter haec bina loca, ut iugum continet sirpiculos, sic calles publicae distantes pastiones. Eaeque ibi, ubi pascuntur in eadem regione, tamen temporibus distinguuntur, aestate quod cum prima luce exeunt pastum, propterea quod tunc herba roscida meridianam, quae est aridior, iucunditate praestat. Sole exorto potum propellunt, ut redintegrantes rursus ad pastum alacriores faciant. Circiter meridianos aestus, dum defervescent, sub umbriferas rupes et arbores patulas subigunt, quoad refrigeratur. Aere vespertino rursus pascunt ad solis occasum. Ita pascere pecus oportet, ut averso sole agat; caput enim maxime ovis molle est. Ab occasu parvo intervallo interposito ad bibendum appellunt et rursus pascunt, quoad contenebravit; iterum enim tum iucunditas in herba redintegrabit. Haec a uergiliarum exortu ad aequinoctium autumnale maxime observant. Quibus in locis messes sunt factae, inigere est utile duplici de causa: quod et caduca spica saturantur et obtritris stramentis et stercoratione faciunt in annum segetes meliores. Reliquae pastiones hiberno ac verno tempore hoc mutant, quod pruina iam exhalata propellunt in pabulum et pascunt diem totum ac meridiano tempore semel agere potum satis habent.

Quod ad pastiones attinet, haec fere sunt; quod ad feturam, quae dicam. Arietes, quibus sis usus ad feturam, bimestri tempore ante secernendum et largius pabulo explendum. Cum redierunt ad stabula e pastu, hordeum si est datum, firmiores fiunt ad laborem sustinendum. Tempus optimum ad admittendum ab arcturi occasu ad aquilae occasum, quod quae postea concipiuntur, fiunt vegrandes atque imbecillae. Ovis praegnas est diebus CL. Itaque fit partus exitu autumnali, cum aer est modice temperatus et primitus oritur herba imbribus primoribus evocata. Quam diu admissura fit, eadem aqua uti oportet, quod commutatio et lanam facit variam et corrumpit uterum. Cum omnes conceperunt, rursus arietes secernendi, iam factis praegnatibus quod sunt molesti, obsunt. Neque pati oportet minores quam bimas saliri, quod neque natum ex his idoneum est, neque non ipsae fiunt deteriores; et non meliores quam trimae admissae. Deterrent ab saliendo, et fiscellas e iunco aliave qua re quod alligant ad naturam; commodius servantur, si secretas pascunt.

In nutricatu, cum parere coeperunt, inigunt in stabula, eaque habent ad eam rem seclusa, ibique nata recentia ad ignem prope ponunt, quoad convaluerunt. Biduum aut triduum retinent, dum adgnoscant matrem agni et pabulo se

saturent. Deinde matres cum grege pastum prodeunt, retinent agnos, ad quos cum reductae ad vesperum, aluntur lacte et rursus discernuntur, ne noctu a matribus conculcentur. Hoc item faciunt mane, antequam matres in pabulum exeant, ut agni satulli fiant lacte. Circiter decem dies cum praeterierunt, palos offigunt et ad eos alligant libro aut qua alia re levi distantes, ne toto die cursantes inter se teneri delibent aliquid membrorum. Si ad matris mammam non accedet, admovere oportet et labra agni ungere buturo aut adipe suilla et olfacere labra lacte. Diebus post paucis obicere iis viciam molitam aut herbam teneram, antequam exeunt pastum et cum reverterunt. Et sic nutricantur, quoad facti sunt quadrimestres. Interea matres eorum iis temporibus non mulgent quidam; qui id melius, omnino perpetuo, quod et lanae plus ferunt et agnos plures. Cum depulsi sunt agni a matribus, diligentia adhibenda est, ne desiderio senescant. Itaque deliniendum in nutricatu pabuli bonitate et a frigore et aestu ne quid laboret curandum. Cum oblivione iam lactis non desiderat matrem, tum denique compellendum in gregem ovium. Castrare oportet agnum non minorem quinque mensum, neque antequam calores aut frigora se fregerunt. Quos arietes summittere volunt, potissimum eligunt ex matribus, quae geminos parere solent. Pleraque similiter faciendum in ovibus pellitis, quae propter lanae bonitatem, ut sunt Tarentinae et Atticae, pellibus integuntur, ne lana inquinetur, quo minus vel infici recte possit vel lavari ac putari. Harum praesepia ac stabula ut sint pura maiorem adhibent diligentiam, quam hirtis. Itaque faciunt lapide strata, urina necubi in stabulo consistat. His quaecumque lubenter vescuntur, ut folia ficulnea et palea, vinacea, furfures, obiciuntur modice, ne parum aut nimium saturentur. Utrumque enim ad corpus alendum inimicum, ut maxime amicum cytisum et medica. Nam et pingues facit facillime et genit lacte.

De sanitate sunt multa; sed ea, ut dixi, in libro scripta magister pecoris habet, et quae opus ad medendum, portat secum. Relinquitur de numero, quem faciunt alii maiorem, alii minorem. Nulli enim huius moduli naturales. Illud fere omnes in Epiro facimus, ne minus habeamus in centena soves hirtas singulos homines, in pellitas binos.

III.

Cui Cossinius, Quoniam satis balasti, inquit, o Faustule noster, accipe a me cum Homérico Melanthio cordo de capellis, et quem ad modum breviter oporteat dicere, disce. Qui caprinum gregem constituere vult, in eligendo animadvertat oportet primum aetatem, ut eam paret, quae iam ferre possit fructum, et de iis eam potius, quae diutius; novella enim quam vetus utilior. De forma uidendum ut sint firmae, magnae, corpus leve ut habeant, crebro pilo, nisi si glabrae sunt (duo enim genera earum); sub rostro duas ut mammulas pensiles habeant, quod eae fecundiores; ubere sint grandiore, ut et lac multum et pingue habeant pro portione. Hircus molliori et potissimum pilo albo ac cervice et collo brevi, gurgulione longiore. Melior fit grex, si non est ex collectis comparatus, sed ex consuetis una. De seminio dico eadem, quae

Atticus in ovibus; hoc aliter, ovium semen tardius esse, quo eae sint placidiores; contra caprile mobilius esse, de quarum uelocitate in Originum libro Cato scribit haec: “in Sauracti et Fiscello caprae ferae sunt, quae saliunt e saxo pedes plus sexagenos”. Oves enim, quas pascimus, ortae sunt ab ovibus feris, sic quas alimus caprae a capris feris ortae, a quis propter Italiam Caprasia insula est nominata. De capris quod meliore semine eae quae bis pariant, ex his potissimum mares solent summitti ad admissuras. Quidam etiam dant operam ut ex insula Melia capras habeant, quod ibi maximi ac pulcherrimi existimantur fieri haedi.

De emptione aliter dico atque fit, quod capras sanas sanus nemo promittit; numquam enim sine febris sunt. Itaque stipulantur paucis exceptis verbis, ac Manilius scriptum reliquit sic: “illasce capras hodie recte esse et bibere posse habereque recte licere, haec spondesne?” De quibus admirandum illud, quod etiam Archelaus scribit: non ut reliqua animalia naribus, sed auribus spiritum ducere solere pastores curiosiores aliquot dicunt.

De alteris quattuor quod est de pastu, hoc dico: Stabulatur pecus melius, ad hibernos exortos si spectat, quod est alsiosum. Id, ut pleraque, lapide aut testa substerni oportet, caprile quo minus sit uliginosum ac lutulentum. Foris cum est pernoctandum, item in eandem partem caeli quae spectent saepta oportet substerni virgultis, ne oblinantur. Non multo aliter tuendum hoc pecus in pastu atque ovillum, tamen habent sua propria quaedam, quod potius silvestribus saltibus delectantur quam pratis; studiose enim de agrestibus fruticibus pascuntur atque in locis cultis virgulta carpunt. Itaque a carpendo caprae nominatae. Ab hoc in lege locationis fundi excipi solet, ne colonus capra natum in fundo pascat. Harum enim dentes inimici sationi, quas etiam astrologi ita receperunt in caelum, ut extra lembum duodecim signorum excluserint; sunt duo haedi at capra non longe a tauro. Quod ad feturam pertinet, desistente autumno exigunt a grege in campo hircos in caprilia, item ut in arietibus dictum. Quae concepit, post quartum mensem reddit tempore verno. In nutricatu haedi, trimestres cum sunt facti, tum submittitur et in grege incipiunt esse. Quid dicam de earum sanitate, quae numquam sunt sanae? Nisi tamen illud unum: quaedam scripta habere magistros pecoris, quibus remediis utantur ad morbos quosdam earum ac vulneratum corpus, quod usu venit iis saepe, quod inter se cornibus pugnant atque in spinosis locis pascuntur. Relinquitur de numero, qui in gregibus est minor caprino quam in ovillo, quod caprae lascivae et quae dispergant se; contra oves quae se congregent ac condensent in locum unum. Itaque in agro Gallico greges plures potius faciunt quam magnos, quod in magnis cito existat pestilentia, quae ad perniciem eum perducit. Satis magnum gregem putant esse circiter quinquagenas. Quibus adsentiri putant id quod usu venit Gaberio, equiti Romano. Is enim cum in suburbano mille iugerum haberet et a caprario quodam, qui adduxit capellas ad urbem decem, sibi in dies singulos denarios singulos dare audisset, coegit mille caprarum, sperans se capturum de praedio in dies singulos denarium mille. Tantum enim fefellit, ut brevi omnes amiserit morbo. Contra in

Sallentinis et in Casinati ad centenas pascunt. De maribus et feminis idem fere discrimen, ut alii ad denas capras singulos parent hircos, ut ego; alii etiam ad quindecim, ut Menas; non nulli etiam, ut Murrius, ad viginti.

IV.

Sed quis e portu potius Italico prodit ac de suillo pecore expedit? Tametsi Scrofam potissimum de ea re dicere oportere cognomen eius significat. Cui Tremelius, Ignorare, inquit, videre, cur appeller Scrofa. Itaque ut etiam hi propter te sciant, cognosce meam gentem suillum cognomen non habere, nec me esse ab Eumaeo ortum. Avus meus primum appellatus est Scrofa, qui quaestor cum esset Licinio Nervae praetori in Macedonia provincia relictus, qui praeesset exercitui, dum praetor rediret, hostes, arbitrati occasionem se habere victoriae, impressionem facere coeperunt in castra. Avos, cum cohortaretur milites ut caperent arma atque exirent contra, dixit celeriter se illos, ut scrofa porcos, disiecturum id quod fecit. Nam eo proelio hostes ita fudit ac fugavit, ut eo Nerva, praetor imperator sit appellatus, avus cognomen invenerit ut diceretur Scrofa. Itaque proavos ac superiores de Tremeliis nemo appellatus Scrofa, nec minus septimus sum deinceps praetorius in gente nostra. Nec tamen defugio quin dicam quae scio de suillo pecore. Agri enim culturae ab initio fui studiosus, nec de pecore suillo mihi et vobis, magnis pecuariis, ea res non est communis. Quis enim fundum colit nostrum, quin sues habeat, et qui non audierit patres nostros dicere ignavum et sumptuosum esse, qui succidiam in carnario suspenderit potius ab laniario quam e domestico fundo?

Ergo qui suum gregem vult habere idoneum, eligere oportet primum bona aetate, secundo bona forma (ea est cum amplitudine membrorum, praeterquam pedibus capite), unicoloris potius quam varias. Cum haec eadem ut habeant verres videndum, tum utique sint cervicibus amplis. Boni seminis sues animadvertuntur a facie et progenie et regione caeli: a facie, si formosi sunt verris et scrofa; a progenie, si porcos multos pariunt; a regione, si potius ex his locis, ubi nascuntur amplae quam exiles, pararis. Emi solent sic: “illasce sues sanas esse habereque recte licere noxisque praestari neque de pecore morbooso esse spondesne?” Quidam adiciunt perfunctas esse a febris et a foria.

In pastu locus huic pecori aptus uliginosus, quod delectatur non solum aqua sed etiam luto. Itaque ob eam rem aiunt lupos, cum sint nancti sues, trahere usque ad aquam, quod dentes fervorem carnis ferre nequeant. Hoc pecus alitur maxime glande, deinde faba et hordeo et cetero frumento, quae res non modo pinguitudinem efficiunt, se etiam carnis iucundum saporem. Pastum exigunt aestate mane et, antequam aestus incipiat, subigunt in umbrosum locum, maxime ubi aqua sit; post meridiem rursus lenito fervore pascunt. Hiberno tempore non prius exigunt pastum, quam pruina evanuit ac colliquefacta est glacies. Ad feturam verres duobus mensibus ante secernendi. Optimum ad admissuram tempus a favonio ad aequinoctium vernum; ita enim

contingit ut aestate pariat. Quattuor enim menses est praegnans et tunc parit, cum pabulo abundat terra. Neque minores admittendae quam anniculae; melius viginti menses exspectare, ut bimae pariant. Cum coeperunt, id facere dicuntur usque ad septimum annum recte. Admissuras cum faciunt, prodigunt in lutosos limites ac lustra, ut uoluntur in luto, quae enim illorum requies, ut lavatio hominis. Cum omnes conceperunt, rursus segregant verres. Verris octo mensum incipit salire, permanet ut id recte facere possit ad trimum, deinde it retro, quoad pervenit ad lanium. Hic enim conciliator suillae carnis datus populo.

Sus graece dicitur hys, olim thys dictus ab illo verbo quod dicunt theyin, quod est immolare. Ab suillo enim pecore immolandi initium primum sumptum videtur, cuius vestigia, quod initiis Cereris porci immolantur, et quod initiis pacis, foedus cum feritur, porcus occiditur, et quod nuptiarum initio antiqui reges ac sublimes viri in Etruria in coniunctione nuptiali nova nupta et nouus maritus primum procum immolant. Prisci quoque Latini, etiam Graeci in Italia idem factitasse videntur. Nam et nostrae mulieres, maxime nutrices, naturam qua feminae sunt in virginibus appellant porcum, et Graecae choeron, significantes esse dignum insigne nuptiarum. Suillum pecus donatum ab natura dicunt ad epulandum; itaque iis animam datam esse proinde ac salem, quae servaret carnem. E quis succidias Galli optimas et maximas facere consuerunt. Optimarum signum, quod etiam nunc quotannis e Gallia adportantur Romam pernae Comacinae et Cavarae et petasiones. De magnitudine Gallicarum succidiarum Cato scribit his verbis: “in Italia Insubres terna atque quaterna milia aulia succidia vere sus usque adeo pinguitudine crescere solet, ut se ipsa stans sustinere non possit neque progredi usquam. Itaque eas siquis quo traicere volt, in plaustrum imponit”. In Hispania ulteriore in Lusitania sus cum esset occisus, Atilius Hispaniensis, minime mendax et multarum rerum peritus in doctrina, dicebat L. Volumnio senatori missam esse offulam cum duabus costis, quae penderet tres et viginti pondo, eiusque suis a cute ad os pedem et tres digitos fuisse. Cui ego, Non minus res admiranda cum mi esset dicta in Arcadia, scio me isse spectatum suum, quae prae pinguitudine carnis non modo surgere non posset, sed etiam ut in eius corpore sorex exesa carne nidum fecisset et peperisset mures. Hoc etiam in Venetia factum accepi.

Sus ad feturam quae sit fecunda, animadvertunt fere ex primo partu, quod non multum in reliquis mutat. In nutritu, quam porculationem appellant, binis mensibus porcos sinunt cum matribus; secundo, cum iam pasci possunt, secernunt. Porci, qui nati hieme, fiunt propter frigora et quod matres aspernantur propter exiguitatem lactis, quod dentibus sauciantur propterea mammae. Scrofa in sua quaeque hara suos alat oportet porcos, quod alienos non aspernatur et ideo, si conturbati sunt, in fetura fit deterior. Natura divisus earum annus bifariam, quod bis parit in anno: quaternis mensibus fert ventrem, binis nutrit. Haram facere oportet circiter trium pedum altam et latam amplius paulo, ea altitudine abs terra, ne, dum exilire velit praegnas,

abortet. Altitudinis modus sit, ut subulcus facile circumspicere possit nequi porcellus a matre opprimatur, et ut facile purigare possit cubile. In haris ostium esse oportet et limen inferius altum palmipedale, ne porci, ex hara cum mater prodit, transilire possint. Quotienscumque haras subulcus purgat, totiens harenam inicere oportet, aut quid item quod exsugat umorem in singulas haras inicere debet; et cum peperit, largiore cibatu sustentare, quo facilius lac suppeditare possit. Quibus hordei circiter binas libras aqua madefactas dare solent, quod quidam duplicant, ut sit mane et vesperi, si alia quae obiciant non habuerint. Cum porci depulsi sunt a mamma, a quibusdam delici appellantur neque iam lactantes dicuntur, qui a partu decimo die habentur puri, et ab eo appellantur ab antiquis sacres, quod tum ad sacrificium idonei dicuntur primum. Itaque aput Plautum in Menaechmis, cum insanum quem putat, ut pietur, in oppido Epidamno interrogat “quanti hic porci sunt sacres?” Si fundus ministrat, dari solent vinacea ac scopi ex uvis. Amisso nomine lactantes dicuntur nefrendes ab eo, quod nondum fabam frendere possunt, id est frangere. Porcus Graecum est nomen antiquum, sed obscuratum, quod nunc eum uocant choeron. In eorum partu scrofae bis die ut bibant curant lactis causa. Parere dicunt oportere porcos, quot mammas habeat; si minus pariat, fructuariam idoneam non esse; si plures pariat, esse portentum. In quo illud antiquissimum fuisse scribitur, quod sus Aeneae Lavini triginta porcos peperit albos. Itaque quod portenderit factum, post tricesimum annum ut Lavinienses condiderint oppidum Albam. Huius suis ac porcorum etiam nunc vestigia apparent, quod et simulacra eorum ahenea etiam nunc in publico posita, et corpus matris ab sacerdotibus, quod in salsura fuerit, demonstratur. Nutricare octonos porcos parvulos primo possunt; incremento facto a peritis dimidia pars removeri solet, quod neque mater potest sufferre lac, neque congenerati alescendo roborari. A partu decem diebus proximis non producunt ex haris matrem, praeterquam potum. Praeteritis decem diebus sinunt exire pastum in propincum locum villae, ut crebro reditu lacte alere possint porcos. Cum creverunt, patiuntur sequi matrem pastum domique secernunt a matribus ac seorsum pascunt, ut desiderium ferre possint parentis nutricis, quod decem diebus assecuntur. Subulcus debet consuefacere, omnia ut faciant ad bucinam. Primo cum incluserunt, cum bucinatum est, aperiunt, ut exire possint in eum locum, ubi hordeum fusum in longitudine. Sic enim minus disperit, quam si in acervo positum, et plures facilius accedunt. Ideo ad bucinam convenire dicuntur, ut silvestri loco dispersi ne dispereant. Castrantur verres commodissime anniculi, utique ne minores quam semestres; quo facto nomen mutant atque e verribus dicuntur maiales. De sanitate suum unum modo exempli causa dicam: porcis lactentibus si scrofa lac non potest suppeditare, triticum frictum dari oportet (crudum enim solvit alvom) vel hordeum obici ex aqua, quoad fiant trimestres. De numero in centum sues decem verres satis esse putant; quidam etiam hinc demunt. Greges inaequabiles habent; sed ego modicum puto centenarium; aliquot maiores faciunt, ita ut ter quinquagenos habeant. Porcorum gregem alii duplicant, alii etiam maiorem faciunt. Minor

grex quam maior minus sumptuosus, quod comites subulcus pauciores quaerit. Itaque gregis numerum pastor ab sua utilitate constituit, non ut quot verres habeat; id enim ab natura sumendum.

V.

Haec hic. At Quintus Lucienus senator, homo quamvis humanus ac iocosus, introiens, familiaris omnium nostrum, Synepirotae, inquit, chairete; Scrofam enim et Varronem nostrum, poimena laon, mane salutavi. Cum alius eum salutasset, alius conviciatus esset, qui tam sero venisset ad constitutum, Videbo iam vos, inquit, balatrones, et hoc adferam meum corium et flagra. Tu vero, Murri, veni mi advocatus, dum asses solvo Laribus, si postea a me repetant, ut testimonium perhibere possis. Atticus Murrio, Narra isti, inquit, eadem, qui sermones sint habiti et quid reliqui sit, ut ad partes paratus veniat; nos interea secundum actum de maioribus adtexamus. In quo quidem, inquit Vaccius, meae partes, quoniam boves ibi. Quare dicam, de bubulo pecore quam acceperim scientiam, ut, siquis quid ignorat, discat; siquis scit, nuncubi labar observet. Vide quid agas, inquam, Vacci. Nam bos in pecuaria maxima debet esse auctoritate, praesertim in Italia, quae a bubus nomen habere sit existimata. Graecia enim antiqua, ut scribit Timaeus, tauros vocabat italos, a quorum multitudine et pulchritudine et fetu vitulorum Italiam dixerunt. Alii scripserunt, quod ex Sicilia Hercules persecutus sit eo nobilem taurum, qui diceretur italus. Hic socius hominum in rustico opere et Cereris minister, ab hoc antiqui manus ita abstineri voluerunt, ut capite sanxerint, siquis occidisset. Qua in re testis Attice, testis Peloponnesos. Nam ab hoc pecore Athenis Buzyges nobilitatus, Argis Bomagiros. Novi, inquit ille, maiestatem boum et ab his dici pleraque magna, ut busycon bupaeda bulimon boopin, uvam quoque bumammam. Praeterea scio hunc esse, in quem potissimum Iuppiter se convertit, cum exportavit per mare e Phoenice amans Europam; hunc esse, qui filios Neptuni a Menalippa servavit, ne in stabulo infantes grex boum obtereret; denique ex hoc putrefacto nasci dulcissimas apes, mellis matres, a quo eas Graeci bugenes appellant; et hunc Plautium locutum esse Latine quam Hirrium praetorem renuntiatum Romam in senatum scriptum habemus. Sed bono animo es, non minus satisfaciam tibi, quam qui Bugoniam scripsit.

Primum in bubulo genere aetatis gradus dicuntur quattuor, prima vitulorum, secunda iuvenorum, tertia bovum novellorum, quarta vetulorum. Discernuntur in prima vitulus et vitula, in secunda iuventus et iuventa, in tertia et quarta taurus et vacca. Quae sterilis est vacca, tauram appellata; quae praegnas, horda. Ab eo in fastis dies hordicidia nominatur, quod tum hordae boves immolantur. Qui gregem armentorum emere vult, observare debet primum, ut sint eae pecudes aetate potius ad fructus ferendos integrae quam iam expartae; ut sint bene compositae, ut integris membris, oblongae, amplae, nigrantibus cornibus, latis frontibus, oculis magnis et nigris, pilosis auribus, compressis malis sublimae, ne gibberae, spina leviter remissa, apertis naribus,

labris subnigris, cervicibus crassis ac longis, a collo palea demissa, corpore bene costato, latis umeris, bonis clunibus, codam profusam usque ad calces ut habeant, inferiorem partem frequentibus pilis subcrispam, cruribus potius minoribus rectis, genibus eminulis distantibus inter se, pedibus non latis, neque ingredientibus qui displudantur, nec cuius ungulae divaricent, et cuius ungues sint leves et pares, corium tactu non asperum ac durum, colore potissimum nigro, deinde robeo, tertio helvo, quarto albo; mollissimus enim hic, ut durissimus primus. De mediis duobus prior quam posterior in eo prior, utrique plures quam nigri et albi. Neque non praeterea ut mares seminis boni sint, quorum et forma est spectanda, et qui ex his orti sunt respondent ad parentum speciem. Et praeterea quibus regionibus nati sint refert; boni enim generis in Italia plerique Gallici ad opus, contra nugatorii Ligusci. Transmarini Epirotici non solum meliores totius Graeciae, de etiam quam Italiae. Tametsi quidam de Italicis, quos propter amplitudinem praestare dicunt, victimas faciunt atque ad deorum servant supplicia, qui sine dubio ad res divinas propter dignitatem amplitudinis et coloris praeponendi. Quod eo magis fit, quod albi in Italia non tam frequentes quam in Thracia ad melana kolpon, ubi alio colore pauci. Eos cum emimus domitos, stipulamur sic: "illosce boves sanos esse noxisque praestari"; cum emimus indomitos, sic: "illosce iuvencos sanos recte deque pecore sano esse noxisque praestari spondesne?" Paulo verbosius haec, qui Manili actiones secuntur lanii, qui ad cultrum bovem emunt; qui ad altaria, hostiae sanitatem non solent stipulari.

Pascuntur armenta commodissime in nemoribus, ubi virgulta et frons multa; hieme cum hibernant secundum mare, aestu abiguntur in montes frondosos. Propter feturam haec servare soleo. Ante admissuram mensem unum ne cibo et potione se impleant, quod existimantur facilius macrae concipere. Contra tauros duobus mensibus ante admissuram herba et palea ac faeno facio pleniores et a feminis secerno. Habeo tauros totidem, quot Atticus, ad matrices LXX duo, unum anniculum, alterum bimum. Haec secundum astri exortum facio, quod Graeci vocant lyran, fidem nostri. Tum denique tauros in gregem redigo. Mas an femina sit concepta, significat descensu taurus, cum init, quod, si mas est, in dexteriores partem abit; si femina, in sinisteriores. Cur hoc fiat, vos videritis, inquit mihi, qui Aristotelem legitis. Non minores oportet inire bimas, ut trimae pariant, eo melius, si quadrimae. Pleraeque pariunt in decem annos, quaedam etiam plures. Maxime idoneum tempus ad concipiendum a delphini exortu usque ad dies quadraginta aut paulo plus. Quae enim ita conceperunt, temperatissimo anni tempore pariunt; vaccae enim mensibus decem sunt praegnates. De quibus admirandum scriptum inveni, exemptis testiculis si statim admiseris taurum, concipere. Eas pasci oportet locis viridibus et aquosis. Cavere oportet ne aut angustius stent aut feriantur aut concurrant. Itaque quod eas aestate tabani concitare solent et bestiolae quaedam minutae sub cauda ali, ne concitentur, aliqui solent includere saeptis. Iis substerni oportet frondem aliudve quid in cubilia, quo mollius conquiescant. Aestate ad aquam appellendum bis, hieme semel. Cum parere

coeperunt, secundum stabula pabulum servari oportet integrum, quod egredientes degustare possint; fastidiosae enim fiunt. Et providendum, quo recipiunt se, ne frigidus locus sit; alior enim eas et famis macescere cogit. In alimoniis armenticium pecus sic contuendum. Lactantes cum matribus ne cubent; obteruntur enim. Ad eas mane adigi oportet, et cum redierunt e pastu. Cum creverunt vituli, levandae matres pabulo viridi obiciendo in praesepeis. Item his, ut fere in omnibus stabulis, lapides substernendi aut quid item, ne ungulae putrescant. Ab aequinoctio autumnali una pascuntur cum matribus. Castrare non oportet ante bimatum, quod difficulter, si aliter feceris, se recipiunt; qui autem postea castrantur, duri et inutiles fiunt. Item ut in reliquis gregibus pecuariis dilectus quotannis habendus et reiculae reiciundae, quod locum occupant earum quae ferre possunt fructus. Siquae amisit vitulum, ei supponere oportet eos, quibus non satis praebent matres. Semestribus vitulis obiciunt furfures triticios et farinam hordeaceam et teneram herbam et ut bibant mane et vesperi curant. De sanitate sunt complura, quae exscripta de Magonis libris armentarium meum crebro ut aliquid legat curo. Numerus de tauris et vaccis sic habendus, ut in sexaginta unus sit anniculus, alter bimus. Quidam habent aut minorem aut maiorem numerum; nam apud Atticum duo tauri in septuaginta matribus sunt. Numerum gregum alius facit alium, quidam centenarium modicum putant esse, ut ego. Atticus centum viginti habet, ut Lucienus.

VI.

Haec ille. At Murrius, qui, dum loquitur Vaccius, cum Lucieno redisset, Ego, inquit, de asinis potissimum dicam, quod sum Reatinus, ubi optimi et maximi fiunt, e quo seminio ego hic procreavi pullos et ipsis Arcadibus vendidi aliquotiens. Igitur asinorum gregem qui facere vult bonum, primum videndum ut mares feminasque bona aetate sumat, utrique ut quam diutissime fructum ferre possint; firmos, omnibus partibus honestos, corpore amplo, seminio bono, ex his locis, unde optumi exeunt, quod faciunt Peloponnesi cum potissimum eos ex Arcadia emant, in Italia ex agro Reatino. Non enim, si murenarum optimarum flutae sunt in Sicilia et helops ad Rhodon, continuo hi pisces in omni mari similes nascuntur. Horum genera duo: unum ferum, quos vocant onagros, ut in Phrygia et Lycaonia sunt greges multi; alterum mansuetum, ut sunt in Italia omnes. Ad seminationem onagrus idoneus, quod et e fero fit mansuetus facile et e mansueto ferus numquam. Quod similes parentum genuntur, eligendi et mas et femina cum dignitate ut sit. In mercando item ut ceterae pecudes emptionibus et traditionibus dominum mutant, et de sanitate ac noxa solet caveri. Commode pascuntur farre et furfuribus hordeaceis. Admittuntur ante solstitium, ut eodem tempore alterius anni pariant; duodecimo enim mense conceptum semen reddunt. Praegnantes opere levant; venter enim labore nationem reddit deteriore. Marem non deiungunt ab opere, quod remissione laboris fit deterior. In partu eadem fere observant, quae in equis. Secundum partum pullos anno non remouent a matre. Proximo

anno noctibus patiuntur esse cum his et leniter capistris aliave qua re habent vinctos. Tertio anno domare incipiunt ad eas res, ad quas quisque eos vult habere in usu. Relinquitur de numero, quorum greges non sane fiunt, nisi ex eis qui onera portant, ideo quod plerique diducuntur ad molas aut ad agri culturam, ubi quid vehendum est, aut etiam ad arandum, ubi levis est terra, ut in Campania. Greges fiunt fere mercatorum, ut eorum qui e Brundisino aut Apulia asellis dossuariis comportant ad mare oleum aut vinum itemque frumentum aut quid aliud.

VII.

Lucienus: Ego quoque adveniens aperiam carceres, inquit, et equos emittere incipiam, nec solum mares, quos admissarios habeo, ut Atticus, singulos in feminas denas. E quis feminas Q. Modius Equiculus, vir fortissimus, etiam patre militari, iuxta ac mares habere solebat. Horum equorum et equarum greges qui habere voluerunt, ut habeant aliqui in Peloponneso et in Apulia, primum spectare oportet aetatem, quam praecipiant sic. Videmus ne sint minores trimae, maiores decem annorum. Aetas cognoscitur et equorum et fere omnium qui ungulas indivisas habent et etiam cornutarum, quod equus triginta mensibus primum dentes medios dicitur amittere, duo superiores, totidem inferiores. Incipientes quartum agere annum itidem eiciunt et totidem eiciunt proximos eorum quos amiserunt, et incipiunt nasci, quos vocant columellares. Quinto anno incipiente item eodem modo amittere binos, cum cavos habeat tum renascentes, ei sexto anno impleri, septimo omnes habere solet renatos et completos. Hoc maiores qui sunt, intellegi negant posse, praeterquam cum dentes sint facti brocchi et supercilia cana et sub ea lacunae, ex observatu dicunt eum equum habere annos sedecim. De forma esse oportet magnitudine modica, quod nec vastos nec minutos decet esse, equas clunibus ac ventribus latis. Equos, ad admissuram quos velis habere, legere oportet amplo corpore, formosos, nulla parte corporis inter se non congruenti. Qualis futurus sit equus, e pullo coniectari potest: si caput habet non magnum nec membris confusis si est, oculis nigris, naribus non angustis, auribus applicatis, iuba crebra, fusca, subcrispa subtenuibus saetis, implicata in dexteriores partem cervicis, pectus latum at plenum, umeris latis, ventre modico, lumbis deorsum versus pressis, scapulis latis, spina maxime duplici, si minus, non exstanti, coda ampla subcrispa, cruribus rectis aequalibus intro versus potius figuratis, genibus rutundis ne magnis, ungulis duris; toto corpore ut habeat venas, quae animadverti possint, quod qui huiusce modi sit, cum est aeger, ad medendum appositus. De stirpe magni interest qua sint, quod genera sunt multa. Itaque ab hoc nobiles a regionibus dicuntur, in Graecia Thessalici equi a Thessalia, in Italia ab Apulia Apuli, ab Rosea Roseani. Equi boni futuri signa, si cum gregalibus in pabulo contendit in currendo aliave qua re, quo potior sit; si, cum flumen travehundum est gregi, in primis progreditur ac non respectat alios. Emptio equina similis fere ac boum et asinorum, quod eisdem rebus in emptione dominum mutant, ut in Manili actionibus sunt perscripta.

Equinum pecus pascendum in pratis potissimum herba, in stabulis ac praeseptibus arido faeno; cum pepererunt, hordeo adiecto, bis die data aqua. Horum feturae initium admissionis facere oportet ab aequinoctio verno ad solstitium, ut partus idoneo tempore fiat; duodecimo enim mense die decimo aiunt nasci. Quae post tempus nascuntur, fere vitiosa atque inutilia existunt. Admittere oportet, cum tempus anni venerit, bis die, mane et vespere, per origam; sic appellatur qui admittit. Eo enim adiutante, equa alligata, celerius admittuntur, neque equi frustra cupiditate impulsu semen eiciunt. Quoad satis sit admitti, ipsae significant, quod se defendunt. Si fastidium salendi est, scillae medium conterunt cum aqua ad mellis crassitudinem; tum ea re naturam equae, cum menses ferunt, tangunt; contra ab locis equae nares equi tangunt. Tametsi incredibile, quod usu venit, memoriae mandandum. Equus matrem salire cum adduci non posset, cum eum capite obvoluto auriga adduxisset et coegisset matrem inire, cum descendenti dempsisset ab oculis, ille impetum fecit in eum ac mordicus interfecit. Cum conceperunt equae, videndum ne aut laborent plusculum aut ne frigidis locis sint, quod aliorum maxime praegnatis obest. Itaque in stabulis et umore prohibere oportet humum, clausa habere ostia ac fenestras, et inter singulas a praeseptibus intericere longurios, qui eas discernant, ne inter se pugnare possint. Praegnatem neque implere cibo neque esurire oportet. Alternis qui admittant, diuturniores equas, meliores pullos fieri dicunt, itaque ut restibiles segetes esse exsuctiores, sic quotannis quae praegnantem fiant.

In decem diebus secundum partum cum matribus in pabulum prodigendum, ne ungulas comburat sterco tenellas. Quinquemestribus pullis factis, cum redacti sunt in stabulum, obiciendum farinam hordeaceam molitam cum furfuribus, et siquid aliud terra natum libenter edent. Anniculis iam factis dandum hordeum et furfures, usque quoad erunt lactantes. Neque prius biennio confecto a lacte removendum; eosque, cum stent cum matribus, interdum tractandum, ne, cum sint diiuncti, exterreantur; eademque causa ibi frenos suspendendum, et eculi consuescant et videre eorum faciem et e motu audire crepitum. Cum iam ad manus accedere consuerint, interdum imponere iis puerum bis aut ter primum in ventrem, postea iam sedentem. Haec facere, cum sit trimus; tum enim maxime crescere ac lacertosum fieri. Sunt qui dicant post annum et sex menses eculum domari posse, sed melius post trimum, a quo tempore farrago dari solet. Haec enim purgatio maxime necessaria equino pecori. Quod diebus decem facere oportet, nec pati alium ullum cibum gustare. Ab undecimo die usque ad quartum decimum dandum hordeum, cottidie adicientem minutatim; quod quarto die feceris, in eo decem diebus proximis manendum. Ab eo tempore mediocriter exercendum et, cum consudarit, perungendum oleo. Si frigus erit, in equi faciendus ignis.

Equi quod alii sunt ad rem militarem idonei, alii ad vecturam, alii ad admissuram, alii ad cursuram, non item sunt spectandi atque habendi. Itaque peritus belli alios eligit atque alit ac docet; aliter quadrigarius ac desultor;

neque idem qui vectorios facere vult ad ephippium aut ad raedam, quod qui ad rem militarem, quod ut ibi ad castra habere volunt acres, sic contra in viis habere malunt placidos. Propter quod discrimen maxime institutum ut castrentur equi. Dempitis enim testiculis fiunt quietiores, ideo quod semine carent. Ii cantherii appellati, ut in subus maiales, gallis gallinaceis capi. De medicina vel plurima sunt in equis et signa morborum et genera curationum, quae pastorem scripta habere oportet. Itaque ab hoc in Graecia potissimum medici pecorum hippiatroi appellati.

VIII.

Cum haec loqueremur, venit a Menate libertus, qui dicat liba absoluta esse et rem divinam paratam; si vellent, venirent illuc et ipsi pro se sacrificarentur. Ego vero, inquam, vos ante ire non patiar, antequam mihi reddideritis tertium actum de mulis, de canibus, de pastoribus. Brevis oratio de istis, inquit Murrius. Nam muli et item hinni bigeneri atque insiticii, non suoapte genere ab radicibus. Ex equa enim et asino fit mulus, contra ex equo et asina hinnus. Uterque eorum ad usum utilis, partu fructus neuter. Pullum asininum a partu recentem subiciunt equae, cuius lacte ampliore fiunt, quod id lacte quam asininum ad alimonia dicunt esse melius. Praeterea educant eum paleis, faeno, hordeo. Matri suppositiciae quoque inserviunt, quo equa ministerium lactis cibum pullo praebere possit. Hic ita eductus a trimo potest admitti; neque enim aspernatur propter consuetudinem equinam. Hunc minorem si admiseris, et ipse citius senescit, et quae ex eo concipiuntur fiunt deteriora. Qui non habent eum asinum, quem supposuerunt equae, et asinum admissarium habere volunt, de asinis quem amplissimum formosissimumque possunt eligunt, quique seminio natus sit bono, Arcadico, ut antiqui dicebant, ut nos experti sumus, Reatino, ubi tricenis ac quadragenis milibus admissarii aliquot venierunt. Quos emimus item ut equos stipulamurque in emendo ac facimus in accipiendo idem, quod dictum est in equis. Hos pascimus praecipue faeno atque hordeo, et id ante admissuram et largius facimus, ut cibo suffundamus vires ad feturam, eodem tempore quo equos adducentes, itemque ut ineat equas per origas curamus. Cum peperit equa mulum aut mulam, nutricantes educamus. Hi si in palustribus locis atque uliginosis nati, habent ungulas molles; idem si exacti sunt aestivo tempore in montes, quod fit in agro Reatino, durissimis ungulis fiunt. In grege mulorum parando spectanda aetas et forma, alterum, ut in vecturis sufferre labores possint; alterum, ut oculos aspectu delectare queant. Hisce enim binis coniunctis omnia vehicula in viis ducuntur. Haec me Reatino auctore probares, mihi inquit, nisi tu ipse domi equarum greges haberes ac mulorum greges vendidisses. Hinnus qui appellatur, est ex equo et asina, minor quam mulus corpore, plerumque rubicundior, auribus ut equinis, iubam et caudam habet similem asini. Item in ventre est, ut equus, menses duodecim. Hosce item ut eculos et educant et alunt et aetatem eorum ex dentibus cognoscunt.

Relinquitur, inquit Atticus, de quadripedibus quod ad canes attinet, quod pertinet maxime ad nos, qui pecus pascimus lanare. Canes enim ita custos pecoris eius quod eo comite indiget ad se defendendum. In quo genere sunt maxime oves, deinde caprae. Has enim lupus captare solet, cui opponimus canes defensores. In suillo pecore tamen sunt quae se vindicent, verres, maiales, scrofae. Prope enim haec apris, qui in silvis saepe dentibus canes occiderunt. Quid dicam de pecore maiore? Cum sciam mulorum gregem, cum pasceretur et eo venisset lupus, ultro mulos circumfluxisse et ungulis caedendo eum occidisse, et tauros solere diversos adsistere clunibus continuatos et cornibus facile propulsare lupos. Quare de canibus quoniam genera duo, unum venaticum et pertinet ad feras bestias silvestres, alterum quod custodiae causa paratur et pertinet ad pastorem, dicam de eo ad formam artis expositam in novem partes.

Primum aetate idonea parandi, quod catuli et vetuli neque sibi neque ovibus sunt praesidio et feris bestiis non numquam praedae. Facie debent esse formosi, magnitudine ampla, oculis nigrantibus aut ravis, naribus congruentibus, labris subnigris aut rubicundis neque resimis superioribus nec pendulis subtus, mento suppresso et ex eo enatis duobus dentibus dextra et sinistra paulo eminulis, superioribus directis potius quam brocchis, acutos quos habeant labro tectos, capitibus et auriculis magnis ac flaccis, crassis cervicibus ac collo, internodiis articulorum longis, cruribus rectis et potius varis quam vatiis, pedibus magnis et latis, qui ingredienti ei displodantur, digitis discretis, unguibus duris ac curvis, solo ne ut corneo ne nimium duro, sed ut fermentato ac molli; a feminibus summis corpore suppresso, spina neque eminula neque curva, cauda crassa; latrato gravi, hiatu magno, colore potissimum albo, quod in tenebris facilius agnoscuntur, specie leonina. Praeterea feminas volunt esse mammosas aequalibus papillis. Item videndum ut boni seminii sint; itaque et a regionibus appellantur Lacones, Epirotici, Sallentini. Videndum ne a venatoribus aut laniis canes emas; alteri quod ad pecus sequendum inertes, alteri, si viderint leporem aut cervum, quod eum potius quam oves sequentur. Quare a pastoribus empti melior, quae oves sequi consuevit, aut sine ulla consuetudine quae fuerit. Canis enim facilius quid adsuescit, eaque consuetudo firmior, quae fit ad pastores, quam quae ad pecudes. Publius Aufidius Pontianus Amiterninus cum greges ovium emisset in Umbria ultima, quibus gregibus sine pastoribus canes accessissent, pastores ut deducerent in Metapontinos saltus et Heracleae emporium, inde cum domum redissent qui ad locum deduxerant, e desiderio hominum diebus paucis postea canes sua sponte, cum dierum multorum via interesset, sibi ex agris cibaria praebuerunt atque in Umbriam ad pastores redierunt. Neque eorum quisquam fecerat, quod in agri cultura Saserna praecepit: qui vellet se a cane sectari, ut ranam obiciat coctam. Magni interest ex semine esse canes eodem, quod cognati maxime inter se sunt praesidio. Sequitur quartum de

emptione: fit alterius, cum a priore domino secundo traditus est. De sanitate et noxa stipulationes fiunt eadem, quae in pecore, nisi quod hic utiliter exceptum est: alii pretium faciunt in singula capita canum, alii ut catuli sequantur matrem, alii ut bini catuli unius canis numerum obtineant, ut solent bini agni ovis, plerique ut accedant canes, qui consuerunt esse una.

Cibatus canis propior hominis quam ovis. Pascitur enim eduliis et ossibus, non herbis aut fronde. Diligenter ut habeat cibaria providendum. Fames enim hos ad quaerendum cibum ducet, si non praebebitur, et a pecore abducat; nisi si, ut quidam putant, etiam illuc pervenerint, proverbium ut tollant anticum vel etiam ut mython aperiant de Actaeone atque in dominum adferant dentes. Nec non ita panem hordeaceum dandum, ut non potius eum in lacte des inritum, quod eo consueti cibo uti a pecore non cito desciscunt. Morticinae ovis non patiuntur vesci carne, ne ducti sapore minus se abstineant. Dant etiam ius ex ossibus et ea ipsa ossa contusa. Dentes enim facit firmiores et os magis patulum, propterea quod vehementius diducuntur malae, acrioresque fiunt propter medullarum saporem. Cibus capere consuescunt interdiu, ubi pascuntur, vesperi, ubi stabulantur. Feturae principium admittendi faciunt veris principio; tum enim dicuntur catulire, id est ostendere velle se maritari. Quae tum admissae, pariunt circiter solstitium; praegnantem enim solent esse ternos menses. In fetura dandum potius hordeaceos quam triticeos panes; magis enim eo aluntur et lactis praebent maiorem facultatem. In nutricatu secundum partum, si plures sunt, statim eligere oportet quos habere velis, reliquos abicere. Quam paucissimos reliqueris, tam optimi in alendo fiunt propter copiam lactis. Substernitur eis acus aut quid item aliud, quod molliore cubili facilius educentur. Catuli diebus XX videre incipiunt. Duobus mensibus primis a partu non diiunguntur a matre, sed minutatim desuefiunt. Educunt eos plures in unum locum et inritant ad pugnandum, quo fiunt acriores, neque defatigari patiuntur, quo fiunt segniores. Consue quoque faciunt ut alligari possint primum levibus vinclis; quae si abrodere conantur, ne id consuescant facere, verberibus eos detertere solent. Pluviis diebus cubilia substernenda fronde aut pabulo duabus de causis: ut ne oblinantur aut perfrigescant. Quidam eos castrant, quod eo minus putant relinquere gregem; quidam non faciunt, quod eos credunt minus acres fieri. Quidam nucibus Graecis in aqua tritis perungunt aures et inter digitos, quod muscae et ricini et pulices soleant, si hoc unguine non sis usus, ea exulcerare. Ne vulnerentur a bestiis, imponuntur his collaria, quae vocantur melium, id est cingulum circum collum ex corio firmo cum clavulis capitatis, quae intra capita insuitur pellis mollis, ne noceat collo durtitia ferri; quod, si lupo aliusve quis his vulneratus est, reliquas quoque canes facit, quae id non habent, ut sint in tuto. Numerus canum pro pecoris multitudine solet parari; fere modicum esse putant, ut singuli sequantur singulos opiliones. De quo numero alius alium modum constituit, quod, si sunt regiones, ubi bestiae sint multae, debent esse plures, quod accidit his qui per calles silvestres longinquos solent comitari in aestiva et hiberna. Villatico vero gregi in fundum satis esse duo, et id marem et

feminam. Ita enim sunt adsiduiiores, quod cum altero item alter fit acrior, et si alteruter aeger est, ne sine cane grex sit.

X.

Cum circumspiceret, nequid praeterisset, Hoc silentium, inquam, vocat alium ad partes. Relicum enim in hoc actu, quot et quod genus sint habendi pastores. Cossinius: Ad maiores pecudes aetate superiores, ad minores etiam pueros, utrosque horum firmiores qui in callibus versentur, quam eos qui in fundo cotidie ad villam redeant (itaque in saltibus licet videre iuventutem, et eam fere armatam, cum in fundis non modo pueri sed etiam puellae pascant). Qui pascunt, eos cogere oportet in pastione diem totum esse, pascere communiter, contra pernoctare ad suum quemque gregem, esse omnes sub uno magistro pecoris; eum esse maiorem natu potius quam alios et peritiorem quam reliquos, quod ei qui aetate et scientia praestat animo aequiore reliqui parent. Ita tamen oportet aetate praestare, ut ne propter senectutem minus sustinere possit labores. Neque enim senes neque pueri callium difficultatem ac montium arduitatem atque asperitatem facile ferunt, quod patiendum illis, qui greges secuntur, praesertim armenticios ac caprinos, quibus rupes ac silvae ad pabulandum cordi. Formae hominum legendae ut sint firmae ac veloces, mobiles, expeditis membris, qui non solum pecus sequi possint, sed etiam a bestiis ac praedonibus defendere, qui onera extollere in iumenta possint, qui excurrere, qui iaculari. Non omnis apta natio ad pecuariam, quod neque Bastulus neque Turdulus idonei, Galli appositissimi, maxime ad iumenta. In emptionibus dominum legitimum sex fere res perficiunt: si hereditatem iustam adiit; si, ut debuit, mancipio ab eo accepit, a quo iure civili potuit; aut si in iure cessit, qui potuit cedere, et id ubi oportuit; aut si usu cepit; aut si e praeda sub corona emit; tumve cum in bonis sectioneve cuius publice veniit. In horum emptione solet accedere peculium aut excipi et stipulatio intercedere, sanum esse, furtis noxisque solutum; aut, si mancipio non datur, dupla promitti, aut, si ita pacti, simpla. Cibus eorum debet esse interdus separatim unius cuiusque gregis, vespertinus in cena, qui sunt sub uno magistro, communis. Magistrum providere oportet ut omnia sequantur instrumenta, quae pecori et pastoribus opus sunt, maxime ad victum hominum et ad medicinam pecudum. Ad quam rem habent iumenta dossuaria domini, alii equas, alii pro iis quid aliud, quod onus dorso ferre possit.

Quod ad feturam humanam pertinet pastorum, qui in fundo perpetuo manent, facile est, quod habent conservam in villa, nec hac venus pastoralis longius quid quaerit. Qui autem in saltibus et silvestribus locis pascunt et non villa, sed casis repentinis imbres vitant, iis mulieres adiungere, quae sequantur greges ac cibaria pastoribus expediant eosque assiduiiores faciant, utile arbitrati multi. Sed eas mulieres esse oportet firmas, non turpes, quae in opere multis regionibus non cedunt viris, ut in Illyrico passim videre licet, quod vel pascere pecus vel ad focum afferre ligna ac cibum coquere vel ad casas instrumentum servare possunt. De nutritu hoc dico, easdem fere et nutrices

et matres. Simul aspicit ad me et, ut te audii dicere, inquit, cum in Liburniam venisses, te vidisse matres familias eorum afferre ligna et simul pueros, quos alerent, alias singulos, alias binos, quae ostenderunt fetas nostras, quae in conopiis iacent dies aliquot, esse eiuncidas ac contemnendas. Cui ego, Certe, inquam; nam in Illyrico hoc amplius, praegnatem saepe, cum venit pariendi tempus, non longe ab opere discedere ibique enixam puerum referre, quem non peperisse, sed invenisse putes; nec non etiam hoc, quas virgines ibi appellant, non numquam annorum viginti, quibus mos eorum non denegavit, ante nuptias ut succumberent quibus vellent et incomitatis ut vagari liceret et filios habere. Quae ad validitatem pertinent hominum ac pecoris et sine medico curari possunt, magistrum scripta habere oportet. Is enim sine litteris idoneus non est, quod rationes dominicas pecuarias conficere nequiquam recte potest. De numero pastorum alii angustius, alii laxius constituere solent. Ego in octogenas hirtas oves singulos pastores constitui, Atticus in centenas. Greges ovium si magni sunt, quos miliarios faciunt quidam, facilius de summa hominum detrahere possis, quam de minoribus, ut sunt et Attici et mei. Septingenarii enim mei; tu, opinor, octingenarios habuisti, nec tamen non, ut nos, arietum decumam partem. Ad equarum gregem quinquagenarium bini homines, utique uterque horum ut secum habeat equas domitas singulas in his regionibus, in quibus in stabula solent equas abigere, ut in Apulia et in Lucanis accidit saepe.

XI.

Quoniam promissa absolvimus, inquit, eamus. Si quidem, inquam, adieceritis de extraordinario pecudum fructu, ut praedictum est, de lacte in eo et tonsura. Lacte est omnium rerum, quas cibi causa capimus, liquentium maxime alibile, et id ovillum, dein caprinum. Quod autem maxime perpurget, est equinum, tum asininum, dein bubulum, tum caprinum. Sed horum sunt discrimina quaedam et a pastionibus et a pecudum natura et a mulgendo: a pastionibus, quod ad alendum utile quod fit ab hordeo et stipula et omnino arido et firmo cibo pecude pasta; ad perpurgandum ab ea, quae a viridi pasta, eo magis, si fuerit ex herbis, quae ipsae sumptae perpurgare solent corpora nostra; a pecudum natura, quod lac melius est a valentibus et ab his quae nondum veteres sunt, quam si est contra. A mulgendo atque ortu optimum est id quod neque nimium longe abest a mulso neque a partu continuo est sumptum. Ex hoc lacte casei qui fiunt, maximi cibi sunt bubuli et qui difficillime transeant sumpti, secundo ovilli, minimi cibi et qui facillime deicianur caprini. Et etiam est discrimen, utrum casei molles ac recentes sint, an aridi et veteres, cum molles sint magis alibiles, in corpore non resides, veteres et aridi contra. Caseum facere incipiunt a vergiliis vernis exortis ad aestivas vergilias. Mulgent vere ad caseum faciendum mane, aliis temporibus meridianis horis, tametsi propter loca et pabulum disparile non usque quaque idem fit. In lactis duos congios addunt coagulum magnitudine oleae, ut coeat, quod melius leporinum et haedinum quam agninum. Alii pro coagulo addunt de fici ramo

lac et acetum, aspergunt item aliis aliquot rebus, quod Graeci appellant alii opon alii dakryon. Non negarim, inquam, ideo aput divae Ruminiae sacellum a pastoribus satam ficum, ibi enim solent sacrificari lacte pro vino et lactentibus. Mamma enim rumis, ut ante dicebant; a rumi etiam nunc dicuntur subrumi agni, lactantes a lacte. Quin aspergi solent sales, melior fossilis quam marinus.

De tonsura ovium primum animadverto, antequam incipiam facere, num scabiem aut ulcera habeant, ut, si opus est, ante curentur, quam tondeantur. Tonsurae tempus inter aequinoctium vernum et solstitium, cum sudare inceperunt oves, a quo sudore recens lana tona sucida appellata est. Tonsas recentes eodem die perungunt vino et oleo, non nemo admixta cera alba et adipe suilla; et si ea tecta solet esse, quam habuit pellem intectam, eam intrinsecus eadem re perinungunt et tegunt rursus. Siqua in tonsura plagam accepit, eum locum oblinunt pice liquida. Oves hirtas tondent circiter hordeaceam messem, in aliis locis ante faenisecia. Quidam has bis in anno tondent, ut in Hispania citeriore, ac semenstres faciunt tonsuras; duplicem impendunt operam, quod sic plus putant fieri lanae, quo nomine quidam bis secant prata. Diligentiores tegeticulis subiectis oves tondere solent, nequi flocci intereant. Dies ad eam rem sumuntur sereni, et iis id faciunt fere a quarta ad decimam; cum sole calidiore tona, ex sudore eius lana fit mollior et ponderosior et colore meliore. Quam demptam ac conglobatam alii vellera, alii vellimna appellant; ex quo vocabulo animadverti licet prius in lana vulsuram quam tonsuram inventam. Qui etiam nunc vellunt, ante triduo habent ieiunas, quod languidae minus aegre radices lanae retinent.

Omnino tonsores in Italiam primum venisse ex Sicilia dicuntur p. R. c. a. CCCCLIII, ut scriptum in publico Ardeae in litteris exstat, eosque adduxisse Publium Titinium Menam. Olim tonsores non fuisse adsignificant antiquorum statuae, quod pleraeque habent capillum et barbam magnam.

Suscipit Cossinius: Fructum ut ovis e lana ad vestimentum, sic capra e pilis ministrat ad usum nauticum et ad bellica tormenta et fabrilia vasa. Neque non quaedam nationes harum pellibus sunt vestitae, ut in Gaetulia et in Sardinia. Cuius usum aput anticos quoque Graecos fuisse apparet, quod in tragoediis senes ab hac pelle vocantur diphtheriae et in comoediis qui in rustico opere morantur, ut aput Caecilium in Hypobolimaeo habet adulescens, aput Terentium in Heautontimorumenos senex. Tondentur, quod magnis villis sunt, in magna parte Phrygiae; unde cilicia et cetera eius generis solent fieri. Sed quod primum ea tonsura in Cilicia sit instituta, nomen id Cilicas adiecisse dicunt.

Illi hoc, neque ab hoc quod mutaret Cossinius. Et simul Vituli libertus in urbem ueniens ex hortis devertitur ad nos et, Ego ad te missus, inquit, ibam domum rogatum ne diem festum faceres breviorum et mature venires. Itaque discedimus ego et Scrofa in hortos ad Vitulum, Niger Turrani noster, illi partim domum, partim ad Menatem.

LIBER III

I.

Cum duae vitae traditae sint hominum, rustica et urbana, quidni, Pinni, dubium non est quin hae non solum loco discretae sint, sed etiam tempore diversam originem habeant. Antiquior enim multo rustica, quod fuit tempus, cum rura colerent homines neque urbem haberent. Etenim vetustissimum oppidum cum sit traditum Graecum Boeotiae Thebae, quod rex Ogyges aedificarit, in agro Romano Roma, quam Romulus rex; nam in hoc nunc denique est ut dici possit, non cum Ennius scripsit:

septingenti sunt paulo plus aut minus anni,
augusto augurio postquam inclita condita Roma est.

Thebae, quae ante cataclysmum Ogygi conditae dicuntur, eae tamen circiter duo milia annorum et centum sunt. Quod tempus si referas ad illud principium, quo agri coli sunt coepti atque in casis et tuguriis habitabant nec murus et porta quid esset sciebant, immani numero annorum urbanos agricolae praestant. Nec mirum, quod divina natura dedit agros, ars humana aedificavit urbes, cum artes omnes dicantur in Graecia intra mille annorum reperte, agri numquam non fuerint in terris qui coli possint. Neque solum antiquior cultura agri, sed etiam melior. Itaque non sine causa maiores nostri ex urbe in agros redigebant suos cives, quod et in pace a rusticis Romanis alebantur et in bello ab his allevabantur. Nec sine causa terram eandem appellabant matrem et Cererem, et qui eam colerent, piam et utilem agere vitam credebant atque eos solos reliquos esse ex stirpe Saturni regis. Cui consentaneum est, quod initia vocantur potissimum ea quae Cereri fiunt sacra. Nec minus oppidi quoque nomen Thebae indicat antiquiorem esse agrum, quod ab agri genere, non a conditore nomen ei est impositum. Nam lingua prisca et in Graecia Aeolis Boeoti sine afflatu vocant collis tebas, et in Sabinis, quo e Graecia venerunt Pelasgi, etiam nunc ita dicunt, cuius vestigium in agro Sabino via Salaria non longe a Reate miliarius clivus cum appellatur tebae. Agri culturam primo propter paupertatem maxime indiscretam habebant, quod a pastoribus qui erant orti in eodem agro et serebant et pascebant; quae postea creverunt peculia diviserunt, ac factum ut dicerentur alii agricolae, alii pastores. Quae ipsa pars duplex est, tametsi ab nullo satis discreta, quod altera est villatica pastio, altera agrestis. Haec nota et nobilis, quod et pecuaria appellatur, et multum homines locupletes ob eam rem aut conductos aut emptos habent saltus; altera villatica, quod humilis videtur, a quibusdam adiecta ad agri culturam, cum esset pastio, neque explicata tota separatim, quod sicam, ab ullo. Itaque cum putarem esse rerum rusticarum, quae constituta sunt fructus causa, tria genera, unum de agri cultura, alterum de re pecuaria, tertium de villaticis pastionibus, tres libros

institui, e quis duo scripsi, primum ad Fundaniam uxorem de agri cultura, secundum de pecuaria ad Turranium Nigrum; qui reliquus est tertius de villaticis fructibus, in hoc ad te mitto, quod visus sum debere pro nostra vicinitate et amore scribere potissimum ad te. Cum enim villam haberes opere tectorio et intestino ac pavementis nobilibus lithostrotis spectandam et parum putasses esse, ni tuis quoque litteris exornati parietes essent, ego quoque, quo ornatior ea esse posset fructu, quod facere possem, haec ad te misi, recordatus de ea re sermones, quos de villa perfecta habuissemus. De quibus exponendis initium capiam hinc.

II.

Comitiis aediliciis cum sole caldo ego et Q. Axius senator tribulis suffragium tulissemus et candidato, cui studebamus, vellemus esse praesto, cum domum rediret, Axius mihi, Dum diribentur, inquit, suffragia, vis potius villae publicae utamur umbra, quam privati candidati tabella dimidiata aedificemus nobis? Opinor, inquam, non solum, quod dicitur, “malum consilium consultori est pessimum”, sed etiam bonum consilium, qui consulit et qui consulitur, bonum habendum. Itaque imus, venimus in villam. Ibi Appium Claudium augurem sedentem invenimus in subselliis, ut consuli, siquid usus poposcisset, esset praesto. Sedebat ad sinistram ei Cornelius Merula consulari familia ortus et Fircellius Pavo Reatinus, ad dextram Minucius Pica et M. Petronius Passer. Ad quem cum accessissemus, Axius Appio subridens, Recipis nos, inquit, in tuum ornithona, ubi sedes inter aves? Ille, Ego vero, inquit, te praesertim, quouis aues hospitales etiam nunc ructor, quas mihi apposuisti paucis ante diebus in Villa Reatina ad lacum Velini eunti de controversiis Interamnatium et Reatinorum. Sed non haec, inquit, villa, quam aedificarunt maiores nostri, frugalior ac melior est quam tua illa perpolita in Reatino? Nuncubi hic vides citrum aut aurum? Num minium aut armenium? Num quod emblemata aut lithostrotum? Quae illic omnia contra. Et cum haec sit communis universi populi, illa solius tua; haec quo succedant e campo cives et reliqui homines, illa quo equae et asini; praeterea cum ad rem publicam administrandam haec sit utilis, ubi cohortes ad dilectum consuli adductae considant, ubi arma ostendant, ubi censores censu admittant populum. Tua scilicet, inquit Axius, haec in campo Martio extremo utilis et non deliciis sumptuosior quam omnes omnium universae Reatinae? Tua enim oblita tabulis pictis nec minus signis; at mea, vestigium ubi sit nullum Lysippi aut Antiphili, at crebra sartoris et pastoris. Et cum illa non sit sine fundo magno et eo polito cultura, tua ista neque agrum habeat ullum nec bovem nec equam. Denique quid tua habet simile villae illius, quam tuus avos ac proavos habebat? Nec enim, ut illa, faenisicia vidit arida in tabulato nec vindemiam in cella neque in granario messim. Nam quod extra urbem est aedificium, nihilo magis ideo est villa, quam eorum aedificia, qui habitant extra portam Flumentanam aut in Aemilianis.

Appius subridens, Quoniam ego ignoro, inquit, quid sit villa, velim me

doceas, ne labar imprudentia, quod volo emere a M. Seio in Ostiensi villam. Quod si ea aedificia villae non sunt, quae asinum tuum, quem mihi quadraginta milibus emptum ostendebas apud te, non habent, metuo ne pro villa emam in litore Seianas aedes. Quod aedificium hic me Lucius Merula impulit ut cuperem habere, cum diceret nullam se accepisse villam, qua magis delectatus esset, cum apud eum dies aliquot fuisset; nec tamen ibi se vidisse tabulam pictam neque signum aheneum aut marmoreum ullum, nihilo magis torcula vasa vindemiatoria aut serias olearias aut trapetas. Axius aspicit Merulam et, Quid igitur, inquit, est ista villa, si nec urbana habet ornamenta neque rustica membra? Quoi ille; Num minus villa tua erit ad angulum Velini, quam neque pictor neque tector vidit umquam, quam in Rosea quae est polita opere tectorio eleganter, quam dominus habes communem cum asino? Cum significasset nutu nihilo minus esse villam eam quae esset simplex rustica, quam eam quae esset utrumque, et ea et urbana, et rogasset, quid ex iis rebus colligeret, Quid? inquit, si propter pastiones tuus fundus in Rosea probandus sit, et quod ibi pascitur pecus ac stabulatur, recte villa appellatur, haec quoque simili de causa debet vocari villa, in qua propter pastiones fructus capiuntur magni. Quid enim refert, utrum propter oves, an propter aves fructus capias? Anne dulcior est fructus apud te ex bubulo pecore, unde apes nascuntur, quam ex apibus, quae ad villam Sei in alvariis opus faciunt? Et num pluris tu e villa illic natos verres lanio vendis, quam hinc apros macellario Seius? Qui minus ego, inquit Axius, istas habere possum in Reatina villa? Nisi si apud Seium Siculum fit mel, Corsicum in Reatino; et hic aprum glans cum pascit empticia, facit pinguem, illic gratuita exilem. Appius: Posse ad te fieri, inquit, Seianas pastiones non negavit Merula; ego non esse ipse vidi. Duo enim genera cum sint pastionum, unum agreste, in quo pecuariae sunt, alterum villaticum, in quo sunt gallinae ac columbae et apes et cetera, quae in villa solent pasci, de quibus et Poenus Mago et Cassius Dionysius et alii quaedam separatim ac dispersim in libris reliquerunt, quae Seius legisse videtur et ideo ex iis pastionibus ex una villa maioris fructus capere, quam alii faciunt ex toto fundo. Certe, inquit Merula; nam ibi vidi greges magnos anserum, gallinarum, columbarum, gruum, pavonum, nec non glirium, piscium, aprorum, ceterae venationis. Ex quibus rebus scribe librarius, libertus eius, qui apparuit Varroni et me absente patrono hospitio accipiebat, in annos singulos plus quinquagena milia e villa capere dicebat. Axio admiranti, Certe nosti, inquam, materterae meae fundum, in Sabinis qui est ad quartum vicesimum lapidem via Salaria a Roma. Quidni? inquit, ubi aestate diem meridie dividere soleam, cum eo Reate ex urbe aut, cum inde venio hieme, noctu ponere castra. Atque in hac villa qui est ornithon, ex eo uno quinque milia scio venisse turdorum denariis ternis, ut sexaginta milia ea pars reddiderit eo anno villae, bis tantum quam tuus fundus ducentum iugerum Reate reddit. Quid? sexaginta, inquit Axius, sexaginta, sexaginta? derides. Sexaginta, inquam. Sed ad hunc bolum ut pervenias, opus erit tibi aut epulum aut triumphus alicuius, ut tunc fuit Scipionis Metelli, aut collegiorum cenae, quae nunc innumerabiles

excandefaciunt annonam macelli. Reliquis annis omnibus si non hanc expectabis summam, spero, non tibi decoquet ornithon; neque hoc accidit his moribus nisi raro ut decipiaris. Quotus quisque enim est annus, quo non videas epulum aut triumphum aut collegia non epulari? Sed propter luxuriam, inquit, quodam modo epulum cotidianum est intra ianuas Romae. Nonne item L. Abucius, homo, ut scitis, apprime doctus, cuius Luciliano caractere sunt libelli, dicebat in Albano fundum suum pastionibus semper vinci a villa? Agrum enim minus decem milia reddere, villam plus vicena. Idem secundum mare, quo loco vellet, si parasset villam, se supra centum milia e villa recepturum. Age, non M. Cato nuper, cum Luculli accepit tutelam, e piscinis eius quadraginta milibus sestertiis vendidit piscis? Axius, Merula mi, inquit, recipe me quaeso discipulum villaticae pastionis. Ille: Quin simul ac promiseris minerval, incipiam, inquit. Ego vero non recuso, vel hodie vel ex ista pastione crebro. Appius: Credo simul ac primum ex isto villatico pecore mortui erunt anseres aut pavones. Cui ille: Quid enim interest, utrum morticinas editis volucres an pisces, quos nisi mortuos estis numquam? Sed oro te, inquit, induce me in viam disciplinae villaticae pastionis ac vim formamque eius expone.

III.

Merula non gravate, Primum, inquit, dominum scientem esse oportet earum rerum, quae in villa circumve eam ali ac pasci possint, ita ut domino sint fructui ac delectationi. Eius disciplinae genera sunt tria: ornithones, leporaria, piscinae. Nunc ornithonas dico omnium alitum, quae intra parietes villae solent pasci. Leporaria te accipere volo non ea quae tritavi nostri dicebant, ubi soli lepores sint, sed omnia saepta, afficta villae quae sunt et habent inclusa animalia, quae pascantur. Similiter piscinas dico eas, quae in aqua dulci aut salsa inclusos habent pisces ad villam. Harum rerum singula genera minimum in binas species dividi possunt: in prima parte ut sint quae terra modo sint contentae, ut sunt pavones turtures turdi; in altera specie sunt quae non sunt contentae terra solum, sed etiam aquam requirunt, ut sunt anseres querquedulae anates. Sic alterum genus illud venaticum duas habet diversas species, unam, in qua est aper caprea lepus; altera item extra villam quae sunt, ut apes cochleae glires. Tertii generis aquatilis item species duae, partim quod habent pisces in aqua dulci, partim quod in marina. De his sex partibus ad ista tria genera item tria genera artificum paranda, aucupes venatores piscatores, aut ab iis emenda quae tuorum servorum diligentia tuearis in fetura ad partus et nata nutrire saginesque, in macellum ut perveniant. Neque non etiam quaedam adsumenda in villam sine retibus aucupis venatoris piscatoris, ut glires cochleas gallinas. Earum rerum cultura instituta prima ea quae in villa habetur; non enim solum augures Romani ad auspicia primum pararunt pullos, sed etiam patres familiae rure. Secunda, quae macerie ad villam venationis causa cluduntur et propter alvaria; apes enim subter subgrundas ad initio villatico usae tecto. Tertiae piscinae dulces fieri coeptae et e fluminibus captos

recepere ad se pisces. Omnibus tribus his generibus sunt bini gradus; superiores, quos frugalitas antique, inferiores, quos luxuria posterior adiecit. Primus enim ille gradus anticus maiorum nostrum erat, in quo essent aviaria duo dumtaxat: in plano cohors, in qua pascebantur gallinae, et earum fructus erat ova et pulli; alter sublimis, in quo erant columbae in turribus aut summa villa. Contra nunc aviaria sunt nomine mutato, quod vocantur ornithones, quae palatum suave domini paravit, ut tecta maiora habeant, quam tum habebant totas villas, in quibus stabulentur turdi ac pavones. Sic in secunda parti ac leporario pater tuus, Axi, praeterquam lepusculum e venatione vidit numquam. Neque enim erat magnum id saeptum, quod nunc, ut habeant multos apros ac capreas, complura iugera maceriis concludunt. Non tu, inquit mihi, cum emisti fundum Tusculanum a M. Pisone, in leporario apri fuerunt multi? In tertia parti quis habebat piscinam nisi dulcem et in ea dumtaxat squalos ac mugiles pisces? Quis contra nunc minthon non dicit sua nihil interesse, utrum iis piscibus stagnum habeat plenum an ranis? Non Philippus, cum ad Ummidium hospitem Casini devertisset et ei e tuo flumine lupum piscem formosum apposuisset atque ille gustasset et exspuisset, dixit, "Peream, ni piscem putavi esse"? Sic nostra aetas in quam luxuriam propagavit leporaria, hac piscinas protulit ad mare et in eas pelagios greges piscium revocavit. Non propter has appellati Sergius Orata et Licinius Murena? Quis enim propter nobilitates ignorat piscinas Philippi, Hortensi, Lucullorum? Quare unde velis me incipere, Axi, dic.

IV.

Ille, Ego vero, inquit, ut aiunt post principia in castris, id est ab his temporibus quam superioribus, quod ex pavonibus fructus capiuntur maiores quam e gallinis. Atque adeo non dissimulabo, quod volo de ornithone primum, quod lucri fecerunt hoc nomen turdi. Sexaginta enim milia Fircellina excande me fecerunt cupiditate.

Merula, Duo genera sunt, inquit, ornithonis: unum delectationis causa, ut Varro hic fecit noster sub Casino, quod amatores invenit multos; alterum fructus causa, quo genere macellarii et in urbe quidam habent loca clausa et rure, maxime conducta in Sabinis, quod ibi propter agri naturam frequentes apparent turdi. Ex iis tertii generis voluit esse Lucullus coniunctum aviarium, quod fecit in Tusculano, ut in eodem tecto ornithonis inclusum triclinium haberet, ubi delicate cenitaret et alios videret in mazonomo positos coctos, alios volitare circum fenestras captos. Quod inutile invenerunt. Nam non tantum in eo oculos delectant intra fenestras aves volitantes, quantum offendit quod alienus odor opplet nares.

V.

Sed quod te malle arbitror, Axi, dicam de hoc quod fructus causa faciunt, unde, non ubi, sumuntur pingues turdi. Igitur testudo, aut peristylum tectum

tegulis aut rete, fit magna, in qua milia aliquot turdorum ac merularum includere possint, quidam cum eo adiciant praeterea aves alias quoque, quae pingues veneunt care, ut miliariae ac coturnices. In hoc tectum aquam venire oportet per fistulam et eam potius per canales angustas serpere, quae facile extergeri possint (si enim late ibi diffusa aqua, et inquinatur facilius et bibitur inutilius), et ex eis caduca quae abundat per fistulam exire, ne luto aves laborent. Ostium habere humile et angustum et potissimum eius generis, quod cocliam appellant, ut solet esse in cavea, in qua tauri pugnare solent; fenestras raras, per quas non videantur extrinsecus arbores aut aves, quod earum aspectus ac desiderium marcescere facit volucres inclusas. Tantum locum luminis habere oportet, ut aves videre possint, ubi assidant, ubi cibus, ubi aqua sit. Tectorio tacta esse levi circum ostia ac fenestras, nequa intrare mus aliave quae bestia possit. Circum huius aedifici parietes intrinsecus multos esse palos, ubi aves assidere possint, praeterea perticis inclinatis ex humo ad parietem et in eis transversis gradatim modicis intervallis perticis adnexis ad speciem cancellorum scaenicorum ac theatri. Deorsum in terram esse aquam, quam bibere possint, cibatus offas positas. Eae maxime glomerantur ex ficis et farre mixto. Diebus viginti antequam tollere vult turdos, largius dat cibum, quod plus ponit et farre subtiliore incipit alere. In hoc tecto caveas, quae caveae tabulata habeant aliquot ad perticarum supplementum. Contra hic aviarius, quae mortuae ibi sunt aves, ut domino numerum reddat, solet ibidem servare. Cum opus sunt, ex hoc aviario ut sumantur idoneae, excludantur in minusculum aviarium, quod est coniunctum cum maiore ostio, lumine illustriore, quod seclitorium appellant. Ibi cum eum numerum habet exclusum, quem sumere vult, omnes occidit. Hoc ideo in secluso clam, ne reliqui, si videant, despondeant animum atque alieno tempore venditoris moriantur. Non ut advenae volucres pullos faciunt, in agro ciconiae, in tecto hirundines, sic aut hic aut illic turdi, qui cum sint nomine mares, re vera feminae quoque sunt. Neque id non secutum ut esset in merulis, quae nomine feminino mares quoque sunt. Praeterea volucres cum partim advenae sint, ut hirundines et grues, partim vernaculae, ut gallinae ac columbae, de illo genere sunt turdi adventicio ac quotannis in Italiam trans mare advolant circiter aequinoctium autumnale et eodem revolant ad aequinoctium vernum, et alio tempore, turtures ac coturnices immani numero. Hoc ita fieri apparet in insulis propinquis Pontiis, Palmariae, Pandateriae. Ibi enim in prima volatura cum veniunt, morantur dies paucos requiescendi causa itemque faciunt, cum ex Italia trans mare remeant.

Appius Axio, Si quinque milia hoc coieceris, inquit, et erit epulum ac triumphus, sexaginta milia quae vis statim in fenus des licebit multum. Tum mihi, tu dic illud alterum genus ornithonis, qui animi causa constitutus a te sub Casino fertur, in quo diceris longe vicisse non modo archetypon inventoris nostri ornithotrophion M. Laenii Strabonis, qui Brundisii hospes noster primus in peristyllo habuit exhedra conclusas aves, quas pasceret obiecto rete, sed etiam in Tusculano magna aedificia Luculli. Quoi ego: Cum habeam sub

oppido Casino flumen, quod per villam fluat, liquidum et altum marginibus lapideis, latum pedes quinquaginta septem, et e villa in villam pontibus transeatur, longum pedes DCCCCL directum ab insula, quae est in imo fluvio, ubi confluit altera amnis, ad summum flumen, ubi est museum, circum huius ripas ambulatio sub dio pedes lata denos, ab hac est in agrum versus ornithonis locus ex duabus partibus dextra et sinistra maceriis altis conclusus. Inter quas locus qui est ornithonis deformatus ad tabulae litterariae speciem cum capitulo, forma qua est quadrata, patet in latitudinem pedes XLVIII, in longitudinem pedes LXXII; qua ad capitulum rutundum est, pedes XXVII. Ad haec, ita ut in margine quasi infimo tabulae descripta sit, ambulatio, ab ornithone plumula, in qua media sunt caveae, qua introitus in aream est. In limine, in lateribus dextra et sinistra porticus sunt primoribus columnis lapideis, pro mediis arbusculis humilibus ordinatae, cum a summa macerie ad epistylum tecta porticus sit rete cannabina et ab epistyllo ad stylobaten. Hae sunt avibus omnigenus oppletae, quibus cibus ministratur per retem et aqua rivolo tenui affluit. Secundum stylobatis interiorem partem dextra et sinistra ad summam aream quadratam e medio diversae duae non latae oblongae sunt piscinae ad porticus versus. Inter eas piscinas tantummodo accessus semita in tholum, qui est ultra rutundus columnatus, ut est in aede Catuli, si pro parietibus feceris columnas. Extra eas columnas est silva manu sata grandibus arboribus, ut infima perluceat, tota saepta maceriis altis. Intra tholi columnas exteriores lapideas et totidem interiores ex abiete tenues locus est pedes quinque latus. Inter columnas exteriores pro pariete reticuli e nervis sunt, ut prospici in silvam possit et quae ibi sunt videri neque avis ea transire. Intra interiores columnas pro pariete rete aviarium est obiectum. Inter has et exteriores gradatim substructum ut theatridion avium, mutuli crebri in omnibus columnis impositi, sedilia avium. Intra retem aves sunt omnigenus, maxime cantrices, ut lusciniolae ac merulae, quibus aqua ministratur per canaliculum, cibus obicitur sub retem. Subter columnarum stylobaten est lapis a falere pedem et dodrantem alta; ipsum falere ad duo pedes altum a stagno, latum ad quinque, ut in culcitas et columellas convivae pedibus circumire possint. Infimo intra falere est stagnum cum margine pedali et insula in medio parva. Circum falere et navalia sunt excavata anatium stabula. In insula est columella, in qua intus axis, qui pro mensa sustinet rotam radiatam, ita ut ad extremum, ubi orbile solet esse, arcuata tabula cavata sit ut tympanum in latitudinem duo pedes et semipedem, in altitudinem palmum. Haec ab uno puero, qui ministrat, ita vertitur, ut omnia una ponantur et ad bibendum et ad edendum et admoveantur ad omnes convivas. Ex suggesto faleris, ubi solent esse peripetasmata, prodeunt anates in stagnum ac nant, e quo rivus pervenit in duas, quas dixi, piscinas, ac pisciculi ultro ac citro commetant, cum et aqua calida et frigida ex orbi ligneo mensaque, quam dixi in primis radiis esse, epitioniis versis ad unum quemque factum sit ut fluat convivam. Intrinsecus sub tholo stella lucifer interdium, noctu hesperus, ita circumeunt ad infimum hemisphaerium ac moventur, ut indicent, quot sint horae. In eodem

hemisphaerio medio circum cardinem est orbis ventorum octo, ut Athenis in horologio, quod fecit Cyrrestes; ibique eminens radius a cardine ad orbem ita movetur, ut eum tangat ventum, qui flet, ut intus scire possis.

Cum haec loqueremur, clamor fit in campo. Nos athletae comitiorum cum id fieri non miraremur propter studia suffragatorum et tamen scire vellemus, quid esset, venit ad nos Pantuleius Parra, narrat ad tabulam, cum diriberent, quendam deprensum tesserulas coicientem in loculum, eum ad consulem tractum a fautoribus competitorum. Pavo surgit, quod eius candidati custos dicebatur deprensus.

VI.

Axius, De pavonibus, inquit, libere licet dicas, quoniam discessit Fircellius, qui, secus siquid diceres de iis, gentilitatis causa fortasse an tecum duceret serram. Quoi Merula, De pavonibus nostra memoria, inquit, greges haberi coepti et venire magno. Ex iis M. Aufidius Lurco supra sexagena milia nummum in anno dicitur capere. Ii aliquanto pauciores esse debent mares quam feminae, si ad fructum spectes; si ad delectationem, contra; formosior enim mas. Pascendi greges agrestes. Transmarini esse dicuntur in insulis, Sami in luco Iunonis, item in Planasia insula M. Pisonis. Hi ad greges constituendos parantur bona aetate et bona forma. Huic enim natura formae e volucris dedit palmam. Ad admissuram haec minores bimae non idoneae nec iam maiores natu. Pascuntur omne genus obiecto frumento, maxime hordeo. Itaque Seius iis dat in menses singulos hordei singulos modios, ita ut in fetura det uberius, antequam salire incipiant. In has a procuratore ternos pullos exigit eosque, cum creverunt, quinquagenis denariis vendit, ut nulla avis hunc assequatur fructum. Praeterea ova emit ac supponit gallinis, ex quibus excusos pullos refert in testudinem eam, in qua pavones habet. Quod tectum pro multitudine pavonum fieri debet et habere cubilia discreta, tectorio levata, quo neque serpens neque bestia accedere ulla possit; praeterea habere locum ante se, quo pastum exeant diebus apricis. Utrumque locum purum esse volunt hae volucres. Itaque pastorem earum cum vatillo circumire oportet ac stercus tollere ac conservare, quod et ad agri culturam idoneum est et ad substramen pullorum. Primus hos Q. Hortensius augurali aditali cena posuisse dicitur, quod potius factum tum luxuriosi quam severi boni viri laudabant. Quem cito secuti multi extulerunt eorum pretia, ita ut ova eorum denariis veneant quinis, ipsi facile quinquagenis, grex centenarius facile quadragena milia sestertia ut reddat, ut quidem Abucius aiebat, si in singulos ternos exigeret pullos, perfici sexagenas posse.

VII.

Interea venit apparitor Appi a consule et augures ait citari. Ille foras exit e villa. At in villam intro involant columbae, de quibus Merula Axio: Si umquam peristerotrophion constituisses, has tuas esse putares, quamvis ferae

essent. Duo enim genera earum in peristerotrophio esse solent: unum agreste, ut alii dicunt, saxatile, quod habetur in turribus ac columinibus villae, a quo appellatae columbae, quae propter timorem naturalem summa loca in tectis captant; quo fit ut agrestes maxime sequantur turres, in quas ex agro evolant suapte sponte ac remeant. Alterum genus columbarum est clementius, quod cibo domestico contentum intra limina ianuae solet pasci. Hoc genus maxime est colore albo, illud alterum agreste sine albo, vario. Ex iis duabus stirpibus fit miscellum tertium genus fructus causa, atque incedunt in locum unum, quod alii vocant peristerona, alii peristerotrophion, in quo uno saepe vel quinque milia sunt inclusae. Peristeron fit ut testudo magna, camara tectus, uno ostio angusto, fenestris punicanis aut latioribus reticulatis utrimque, ut locus omnis sit illustris, neve quae serpens aliudve quid animal maleficum introire queat. Intrinsecus quam levissimo marmorato toti parietes ac camarae oblinuntur et extrinsecus circum fenestras, ne mus aut lacerta qua adrepere ad columbaria possit. Nihil enim timidius columba. Singulis paribus columbaria fiunt rutunda in ordinem crebra, ordines quam plurimi possunt a terra usque ad camaram. Columbaria singula esse oportet ut os habeat, quo modo introire et exire possit, intus ternarum palmarum ex omnibus partibus. Sub ordines singulos tabulae fictae ut sint bipalmes, quo utantur vestibulo ac prodeant. Aquam esse oportet quae influat, unde et bibere et ubi lavari possint. Permundae enim sunt hae volucres. Itaque pastorem columbarum quotquot mensibus crebro oportet everrere; est enim quod eum inquinat locum appositum ad agri culturam, ita ut hoc optimum esse scripserint aliquot. Siquae columba quid offenderit, ut medeatur; siquae perierit, ut efferatur; siqui pulli idonei sunt ad vendendum, promat. Item quae fetae sunt, certum locum ut disclusum ab aliis rete habeat, quo transferantur, e quo foras ex peristerone evolare possint matres. Quod faciunt duabus de causis: una, si fastidiunt aut inclusae consenescent, quod libero aere, cum exierint in agros, redintegrentur; altera de causa propter inlicium. Ipsae enim propter pullos, quos habent, utique redeunt, nisi a corvo occisae aut ab accipitre interceptae. Quos columbarii interficere solent duabus virgis viscatibus defictis in terra inter se curvatis, cum inter eas posuerint obligatum animal, quod petere soleant accipitres, qui ita decipiuntur, cum se obleverunt visco. Columbas redire solere ad locum licet animadvertere, quod multi in theatro e sinu missas faciunt, atque ad locum redeunt, quae nisi reverterentur, non emitterentur. Cibus apponitur circum parietes in canalibus, quas extrinsecus per fistulas supplent. Delectantur milio, tritico, hordeo, piso, fasiolis, ervo. Item fere haec, in turribus ac summis villis qui habent agrestes columbas, quoad possunt, imitandum. In peristeronas aetate bona parandum, neque pullos neque vetulas, totidem mares quot feminas. Nihil columbis fecundius. Itaque diebus quadragenis concipit et parit et incubat et educat. Et hoc fere totum annum faciunt; tantummodo intervallum faciunt a bruma ad aequinoctium vernum. Pulli nascuntur bini, qui simulac creverunt et habent robur, cum matribus pariunt. Qui solent saginare pullos columbinos, quo pluris vendant, secludunt

eos, cum iam pluma sunt tecti. Deinde manducato candido farciunt pane; hieme hoc bis, aestate ter, mane meridie vesperi; hieme demunt cibum medium. Qui iam pinnas incipiunt habere, relincunt in nido inlisis cruribus et matribus, uberius ut cibo uti possint, obiciunt. Eo enim totum diem se et pullos pascunt. Qui ita educantur, celerius pinguiore fiunt quam alii, et candidae fiunt parentes eorum. Romae, si sunt formosi, bono colore, integri, boni seminis, paria singula volgo veneunt ducenis nummis nec non eximia singulis milibus nummum. Quas nuper cum mercator tanti emere vellet a L. Axio, equite Romano, minoris quadringentis denariis datorum negavit. Axius, Si possem emere, inquit, peristerona factum, quem ad modum in aedibus cum habere vellem, emi fictilia columbaria, iam issem emptum et misissem ad villam. Quasi vero, inquit Pica, non in urbe quoque sint multi. An tibi columbaria qui in tegulis habent, non videntur habere peristeronas, cum aliquot supra centum milium sestertium habeant instrumentum? E quis alicuius totum emas censeo, et antequam aedificas rure, magnum condiscas hic in urbe cotidie lucrum assem semissem condere in loculos. Tu, Merula, sic perge deinceps.

VIII.

Ille, Turturibus item, inquit, locum constituendum proinde magnum, ac multitudinem alere velis; eumque item ut de columbis dictum est, ut habeat ostium ac fenestras et aquam puram ac parietes camaras munitas tectorio; sed pro columbariis in pariete mutulos aut palos in ordinem, supra quos tegeticulae cannabinae sint impositae. Infimum ordinem oportet abesse a terra non minus tres pedes, inter reliquos dodrantes, a summo ad camaram semipedem, aequae latum ac mutulus a pariete extare potest, in quibus dies noctesque pascuntur. Cibatum quod sit, obiciunt triticum siccum, in centenos videnos turtures fere semodium, cottidie everrentes eorum stabula, a stercore ne offendantur, quod item servatur ad agrum colendum. Ad saginandum adpositissimum tempus circiter messem. Etenim matres eorum tum optimae sunt, cum pulli plurimi gignuntur, qui ad farturam meliores. Itaque eorum fructus id temporis maxime consistit.

IX.

Axius, Ego quae requiro farturae membra, de gallinis dic sodes, Merula: tum de reliquis siquid idoneum fuerit ratiocinari, licebit. Igitur sunt gallinae quae vocantur generum trium: villaticae et rusticae et Africanae. Gallinae villaticae sunt, quas deinceps rure habent in villis. De his qui ornithoboscion instituere vult, id est adhibita scientia ac cura ut capiant magnos fructus, ut factitaverunt Deliaci, haec quinque maxime animadvertant oportet; de emptione, cuius modi et quam multas parent; de fetura, quem ad modum admittant et pariant; de ovis, quem ad modum incubent et excudent; de pullis, quem ad modum et a quibus educantur; hisce appendix adicitur pars quinta, quem ad modum

saginentur. Ex quibus tribus generibus proprio nomine vocantur feminae quae sunt villaticae gallinae, mares galli, capi seminares, qui sunt castrati. Gallos castrant, ut sint capi, candenti ferro inurentes ad infima crura, usque dum rumpatur, et quod exstat ulcus, oblinunt figlina creta. Qui spectat ut ornithoboscion perfectum habeat, scilicet genera ei tria paranda, maxime villaticas gallinas. E quis in parando eligat oportet fecundas, plerumque rubicunda pluma, nigris pinnis, imparibus digitis, magnis capitibus, crista erecta, amplas; hae enim ad partiones sunt aptiores. Gallos salaces qui animadvertunt, si sunt lacertosi, rubenti crista, rostro brevi pleno acuto, oculis ravis aut nigris, palea rubra subalbicanti, collo vario aut aureolo, feminibus pilosis, cruribus brevibus, unguibus longis, caudis magnis, frequentibus pinnis; item qui elati sunt ac vociferant saepe, in certamine pertinaces et qui animalia quae nocent gallinis non modo non pertimescant, sed etiam pro gallinis propugnent. Nec tamen sequendum in seminio legendo Tanagricos et Melicos et Chalcidicos, qui sine dubio sunt pulchri et ad proeliandum inter se maxime idonei, sed ad partus sunt steriliores. Si ducentos alere velis, locus saeptus adtribuendus, in quo duae caveae coniunctae magnae constituendae, quae spectent ad exorientem versus, utraeque in longitudinem circiter decem pedum, latitudine dimidio minores, altitudine paulo humiliores: in utraque fenestra lata tripedalis, et eae pede altiores e viminibus factae raris, ita ut lumen praebeant multum, neque per eas quicquam ire intro possit, quae nocere solent gallinis. Inter duas ostium sit, qua gallinarius, curator earum, ire possit. In caveis crebrae perticae traiectae sint, ut omnes sustinere possint gallinas. Contra singulas perticas in pariete exclusa sint cubilia earum. Ante sit, ut dixi, vestibulum saeptum, in quo diurno tempore esse possint atque in pulvere volutari. Praeterea sit cella grandis, in qua curator habitet, ita ut in parietibus circum omnia plena sint cubilia gallinarum aut exsculpta aut adficta firmiter. Motus enim, cum incubat, nocet. In cubilibus, cum parturient, acus substernendum; cum pepererunt, tollere substramen et recens aliud subicere, quod pulices et cetera nasci solent, quae gallinam conquiescere non patiuntur; ob quam rem ova aut inaequabiliter maturescunt aut consenescent. Quae velis incubet, negant plus XXV oportere ova incubare, quamvis propter fecunditatem pepererit plura, optimum esse partum ab aequinoctio verno ad autumnale. Itaque quae ante aut post nata sunt et etiam prima eo tempore, non supponenda; et ea quae subicias, potius vetulis quam pullitris, et quae rostra aut ungues non habeant acutos, quae debent potius in concipiendo occupatae esse quam incubando. Adpositissimae ad partum sunt anniculae aut bimae. Si ova gallinis pavonina subicias, cum iam decem dies fovere coepit, tum denique gallinacia subicere, ut una excudat. Gallinaciis enim pullis bis deni dies opus sunt, pavoninis ter noveni. Eas includere oportet, ut diem et noctem incubent, praeterquam mane et vespere, dum cibus ac potio is detur. Curator oportet circumeat diebus interpositis aliquot ac vertere ova, ut aequabiliter concalefiant. Ova plena sint atque utilia necne, animadverti aiunt posse, si demiseris in aquam, quod inane natet, plenum desidit. Qui ut hoc intellegant

concutiant, errare, quod vitale venas confundant in iis. Idem aiunt, cum ad lumen sustuleris, quod perluceat, id esse inane. Qui haec volunt diutius servare, perfricant sale minuto aut muria tres aut quattuor horas eaque abluta condunt in furfures aut acus. In supponendo ova observant ut sint numero imparia. Ova, quae incubantur, habeantne semen pulli, curator quadriduo postquam incubari coepit intellegere potest. Si contra lumen tenuit et purum unius modi esse animadvertit, putant eiciendum et aliud subiciendum. Excusos pullos subducendum ex singulis nidis et subiciendum ei quae habeat paucos; ab eaque, si reliqua sint ova pauciora, tollenda et subicienda aliis, quae nondum excuderunt et minus habent triginta pullos. Hoc enim gregem maiorem non faciendum. Obiciendum pullis diebus XV primis mane subiecto pulvere, ne rostris noceat terra dura, polentam mixtam cum nasturti semine et aqua aliquanto ante factam intritam, ne tum denique in eorum corpore turgescat; aqua prohibendum. Qua de clunibus coeperint habere pinnas, e capite, e collo eorum crebro eligendi pedes; saepe enim propter eos consenescent. Circum caveas eorum incendendum cornum cervinum, ne quae serpens accedat, quarum bestiarum ex odore solent interire. Prodigendae in solem et in stercilinum, ut volutare possint, quod ita alibiliores fiunt; neque pullos, sed omne ornithoboscion cum aestate, tum utique cum tempestas sit mollis atque apricum; intento supra rete, quod prohibeat eas extra saepta evolare et in eas involare extrinsecus accipitrem aut quid aliud; evitantem caldorem et frigus, quod utrumque iis adversum. Cum iam pinnas habebunt, consuefaciendum ut unam aut duas sectentur gallinas, ceterae ut potius ad pariendum sint expeditae, quam in nutricatu occupatae. Incubare oportet incipere secundum novam lunam, quod fere quae ante, pleraque non succedunt. Diebus fere viginti excidunt. De quibus villaticis quoniam vel nimium dictum, brevitate reliqua compensabo.

Gallinae rusticae sunt in urbe rarae nec fere nisi mansuetae in cavea videntur Romae, similes facie non his gallinis villaticis nostris, sed Africanis. Aspectu ac facie incontaminatae in ornatibus publicis solent poni cum psittacis ac merulis albis, item aliis id genus rebus inusitatis. Neque fere in villis ova ac pullos faciunt, sed in silvis. Ab his gallinis dicitur insula Gallinaria appellata, quae est in mari Tusco secundum Italiam contra montes Liguscos, Intimilium, Album Ingaunum; alii ab his villaticis invectis a nautis, ibi feris factis procreatis. Gallinae Africanae sunt grandes, variae, gibberae, quas meleagridas appellant Graeci. Haec novissimae in triclinium cenantium introierunt e culina propter fastidium hominum. Veneunt propter penuriam magno. De tribus generibus gallinae saginantur maxime villaticae. Eas includunt in locum tepidum et angustum et tenebricosum, quod motus earum et lux pinguitudinis vindicta, ad hanc rem electis maximis gallinis, nec continuo his, quas Melicas appellant falso, quod antiqui, ut Thetim Thelim dicebant, sic Medicam Melicam vocabant. Hae primo dicebantur, quae ex Medica propter magnitudinem erant allatae quaeque ex iis generatae, postea propter similitudinem amplae omnes. Ex iis evulsis ex alis pinnis et e cauda

farciant turundis hordeaceis partim admixtis farina lolleacia aut semine lini ex aqua dulci. Bis die cibum dant, observantes ex quibusdam signis ut prior sit concoctus, antequam secundum dent. Dato cibo, quom perpurgarunt caput, nequos habeat pedes, rursus eas concludunt. Hoc faciunt usque ad dies XXV; tunc denique pingues fiunt. Quidam et triticeo pane intrito in aquam, mixto vino bono et odorato, farciunt, ita ut diebus XX pingues reddant ac teneras. Si in farciendo nimio cibo fastidiunt, remittendum in datione pro portione, ac decem primis processit, in posterioribus ut deminuat eadem ratione, ut vicesimus dies et primus sint pares. Eodem modo palumbos farciunt ac reddunt pingues.

X.

Transi, inquit Axius, nunc in illud genus, quod non est ulla villa ac terra contentum, sed requirit piscinas, quod vos philograeci vocatis amphibium. In quibus ubi anseres aluntur, nomine alieno chenoboscion appellatis. Horum greges Scipio Metellus et M. Seius habent magnos aliquot. Merula, Seius, inquit, ita greges comparavit anserum, ut hos quinque gradus obseruaret, quos in gallinis dixi. Hi sunt de genere, de fetura, de ovis, de pullis, de sagina. Primum iubebat servum in legendo observare ut essent ampli et albi, quod plerumque pullos similes sui faciunt. Est enim alterum genus varium, quod ferum vocatur, nec cum iis libenter congregantur, nec aeque fit mansuetum. Anseribus ad admittendum tempus est aptissimum a bruma, ad pariendum et incubandum a Kalendis Februariis vel Martiis usque ad solstitium. Saliunt fere in aqua, iniguntur in flumen aut piscinam. Singulae non plus quam ter in anno pariunt. Singulis, ubi pariant, faciendum haras quadratas circum binos pedes et semipedem; eas substernendum palea. Notandum earum ova aliquo signo, quod aliena non excidunt. Ad incubandum supponunt plerumque novem aut undecim, qui hoc minus, quinque, qui hoc plus, XV. Incubat tempestatibus dies triginta, tepidioribus XXV. Cum excudit, quinque diebus primis patiuntur esse cum matre. Deinde cotidie, serenum cum est, producant in prata, item piscinas aut paludes, iisque faciunt haras supra terram aut suptus, in quas non inducunt plus vicanos pullos, easque cellas provident ne habeant in solo umorem et ut molle habeant substramen e palea aliave qua re, neve qua eo accedere possint mustelae aliave quae bestiae noceant. Anseres pascunt in umidis locis et pabulum serunt, quod aliquem ferat fructum, seruntque his herbam, quae vocatur seris, quod ea aqua tacta, etiam cum est arida, fit viridis. Folia eius decerpentes dant, ne, si eo inegerint, ubi nascitur, aut obtendo perdant aut ipsi cruditate pereant; voraces enim sunt natura. Quo temperandum iis, qui propter cupiditatem saepe in pascendo, si radicem prenderunt, quam educere velint e terra, abrumpunt collum; perimbecillum enim id, ut caput molle. Si haec herba non est, dandum hordeum aut frumentum aliud. Cum est tempus farraginis, dandum, ut in seri dixi. Cum incubant, hordeum iis intritum in aqua apponendum. Pullis primum biduo polenta aut hordeum apponitur, tribus proximis nasturtium viride consecutum

minutatim ex aqua in vas aliquod. Cum autem sunt inclusi in haras aut speluncas, ut dixi, viceni, obiciunt iis polentam hordeaceam aut farraginem herbamve teneram aliquam concisam. Ad saginandum eligunt pullos circiter sesquimenses qui sunt nati; eos includunt in saginario ibique polentam et pollinem aqua madefacta dant cibum, ita ut ter die saturent. Secundum cibum large ut bibant faciunt potestatem. Sic curati circiter duobus mensibus fiunt pingues. Quotienscumque sumpserunt, locus solet purgari, quod amant locum purum neque ipsi ullum, ubi fuerunt, relinquant purum.

XI.

Qui autem volunt greges anatum habere ac constituere nessotrophion, primum locum, quod est facultas, eligere oportet palustrem, quod eo maxime delectantur; si id non, potissimum ibi, ubi sit naturalis aut lacus aut stagnum aut manu facta piscina, quo gradatim descendere possint. Saeptum altum esse oportet, ubi versentur, ad pedes quindecim, ut vidistis ad villam Sei, quod uno ostio claudatur. Circum totum parietem intrinsecus crepido lata, in qua secundum parietem sint tecta cubilia, ante ea vestibulum earum exaequatum tectorio opere testaceo. In eo perpetua canalis, in quam et cibus imponitur iis et immittitur aqua; sic enim cibum capiunt. Omnes parietes tectorio levigantur, ne faeles aliave quae bestia introire ad nocendum possit, idque saeptum totum rete grandibus maculis integitur, ne eo involare aquila possit neve evolare anas. Pabulum iis datur triticum, hordeum, vinacei, non numquam etiam ex aqua cammari et quaedam eius modi aquatilia. Quae in eo saepto erunt piscinae, in eas aquam large influere oportet, ut semper recens sit.

Sunt item non dissimilia alia genera, ut querquedulae, phalarides, sic perdices, quae, ut Archelaus scribit, voce maris audita concipiunt. Quae, ut superiores, neque propter fecunditatem neque propter suavitatem saginantur et sic pascendo fiunt pingues. Quod ad villaticarum pastionum primum actum pertinere sum ratus, dixi.

XII.

Interea redit Appius, et percontati nos ab illo et ille a nobis, quid esset dictum ac factum. Appius, Sequitur, inquit, actus secundi generis adfecticius ad villam qui solet esse, ac nomine antico a parte quadam leporarium appellatum. Nam neque solum lepores in eo includuntur silva, ut olim in iugero agelli aut duobus, sed etiam cervi aut caprae in iugeribus multis. Quintus Fulvius Lippinus dicitur habere in Tarquiniensi saepta iugera quadraginta, in quo sunt inclusa non solum ea quae dixi, sed etiam oves ferae, etiam hoc maius hic in Statoniensi et quidam in locis aliis; in Gallia vero transalpina T. Pompeius tantum saeptum venationis, ut circiter passum locum inclusum habeat. Praeterea in eodem consaepto fere habere solent cocliaria atque alvaria atque etiam dolia, ubi habeant conclusos glires. Sed horum omnium custodia, incrementum et pastio aperta, praeterquam de apibus. Quis enim ignorat

saepta e maceriis ita esse oportere in leporario, ut tectorio tacta sint et sint alta? Alterum ne faelis aut maelis aliave quae bestia introire possit, alterum ne lupo transilire; ibique esse latebras, ubi lepores interdum delitiscant in virgultis atque herbis, et arbores patulis ramis, quae aquilae impediunt conatus. Quis item nescit, paucos si lepores, mares ac feminas, intromiserit, brevi tempore fore ut impleatur? Tanta fecunditas huius quadrupedis. Quattuor modo enim intromisit in leporarium, brevi solet repleri. Etenim saepe, cum habent catulos recentes, alios in ventre habere reperiuntur. Itaque de iis Archelaus scribit, annorum quot sit qui velit scire, inspicere oportere foramina naturae, quod sine dubio alius alio habet plura. Hos quoque nuper institutum ut saginarent plerumque, cum exceptos e leporario condant in caveis et loco clauso faciant pingues. Quorum ergo tria genera fere sunt: unum Italicum hoc nostrum pedibus primis humilibus, posterioribus altis, superiore parte pulla, ventre albo, auribus longis. Qui lepus dicitur, cum praegnas sit, tamen concipere. In Gallia Transalpina et Macedonia fiunt permagni, in Hispania et in Italia mediocres. Alterius generis est, quod in Gallia nascitur ad Alpis, qui hoc fere mutant, quod toti candidi sunt; ii raro perferuntur Romam. Tertiū generis est, quod in Hispania nascitur, similis nostro lepori ex quadam parte, sed humile, quem cuniculum appellant. L. Aelius putabat ab eo dictum leporem a celeritudine, quod levipes esset. Ego arbitror a Graeco vocabulo antico, quod eum Aeolis leporin appellabant. Cuniculi dicti ab eo, quod sub terra cuniculos ipsi facere solent, ubi lateant in agris. Horum omnium tria genera, si possis, in leporario habere oportet. Duo quidem utique te habere puto, quod in Hispania annis ita fuisti multis, ut inde te cuniculos persecutos credam.

XIII.

Apros quidem posse haberi in leporario nec magno negotio ibi et captivos et cicuris, qui ibi nati sint, pingues solere fieri scis, inquit, Axi. Nam quem fundum in Tusculano emit hic Varro a M. Pupio Pisone, vidisti ad bucinam inflatam certo tempore apros et capreas convenire ad pabulum, cum ex superiore loco e palaestra apris effunderetur glans, capreis victa aut quid aliud. Ego vero, inquit ille, apud Q. Hortensium cum in agro Laurenti essem. Ibi istuc magis thraikikos fieri vidi. Nam silva erat, ut dicebat, supra quinquaginta iugerum maceria saepta, quod non leporarium, sed therotrophium appellabat. Ibi erat locus excelsus, ubi triclinio posito cenabamus, quo Orphea vocari iussit. Qui cum eo venisset cum stola et cithara cantare esset iussus, bucina inflavit, ut tanta circumfluxerit nos cervorum aprorum et ceterarum quadrupedum multitudo, ut non minus formosum mihi visum sit spectaculum, quam in Circo Maximo aedilium sine Africanis bestiis cum fiunt venationes.

XIV.

Axi, Tuas partes, inquit, sublevavit Appius, O Merula noster. Quod ad

venationem pertinet, breviter secundus trasactus est actus, nec de cochleis ac gliribus quaero, quod relicum est; neque enim magnum molimentum esse potest. Non istuc tam simplex est, inquit Appius, quam tu putas, O Axi noster. Nam et idoneus sub dio sumendus locus cochleariis, quem circum totum aqua claudas, ne, quas ibi posueris ad partum, non liberos earum, sed ipsas quaeras. Aqua, inquam, finiendae, ne fugitivarius sit parandus. Locus is melior, quem et non coquit sol et tangit ros. Qui si naturalis non est, ut fere non sunt in aprico loco, neque habeas in opaco ubi facias, ut sunt sub rupibus ac montibus, quorum adluant radices lacus ac fluvii, manu facere oportet roscidum. Qui fit, si adduxeris fistula et in eam mammillas imposueris tenues, quae eructent aquam, ita ut in aliquem lapidem incidat ac late dissipetur. Parvus iis cibus opus est, et is sine ministratore, et hunc, dum serpit, non solum in area reperit, sed etiam, si rivus non prohibet, parietes stantes invenit. Denique ipsae et ruminantes ad propolam vitam diu producunt, cum ad eam rem pauca laurea folia intericiant et aspergant furfures non multos. Itaque cocus has vivas an mortuas coquat, plerumque nescit. Genera cochlearum sunt plura, ut minutae albulae, quae afferuntur e Reatino, et maximae, quae de Illyrico apportantur, et mediocres, quae ex Africa afferuntur; non quo non in his regionibus quibusdam locis ac magnitudinibus sint disperiles; nam et valde amplae sunt ex Africa, quae vocantur solitannae, ita ut in eas LXXX quadrantes coici possint, et sic in aliis regionibus eadem inter se collatae minores ac maiores. Hae in fetura pariunt innumerabilia. Earum semen minutum ac testa molli diuturnitate obdurescit. Magnis insulis in areis factis magnum bolum deferunt aeris. Has quoque saginare solent ita, ut ollam cum foraminibus incrustent sapa et farri, ubi pascantur, quae foramina habeat, ut intrare aer possit; vivax enim haec natura.

XV.

Glirarium autem dissimili ratione habetur, quod non aqua, sed maceria locus saepitur; tota levi lapide aut tectorio intrinsecus incrustatur, ne ex ea erepere possit. In eo arbusculas esse oportet, quae ferant glandem. Quae cum fructum non ferunt, intra maceriam iacere oportet glandem et castaneam, unde saturi fiant. Facere iis cavos oportet laxiores, ubi pullos parere possint; aquam esse tenuem, quod ea non utuntur multum et aridum locum quaerunt. Hae saginantur in doliis, quae etiam in villis habent multi, quae figuli faciunt multo aliter atque alia, quod in lateribus eorum semitas faciunt et cavum, ubi cibum constituent. In hoc dolium addunt glandem aut nuces iuglandes aut castaneam. Quibus in tenebris cum operculum impositum est in doleis, fiunt pingues.

XVI.

Appius, Igitur relinquitur, inquit, de pastione villatica tertius actus de piscinis. Quid tertius? inquit Axius. An quia tu solitus es in adulescentia tua domi

mulsum non bibere propter parsimoniam, nos mel neclegemus? Appius nobis, Verum dicit, inquit. Nam cum pauper cum duobus fratribus et duabus sororibus essem relictus, quarum alteram sine dote dedi Lucullo, a quo hereditate me cessa primum et primus mulsum domi meae bibere coepi ipse, cum interea nihilo minus paene cotidie in convivio omnibus daretur mulsum. Praeterea meum erat, non tuum, eas novisse volucres, quibus plurimum natura ingeni atque artis tribuit. Itaque eas melius me nosse quam te ut scias, de incredibili earum arte naturali audi. Merula, ut cetera fecit, historicos quae sequi melitturgoe soleant demonstrabit.

Primum apes nascuntur partim ex apibus, partim ex bubulo corpore putrefacto. Itaque Archelaus in epigrammate ait eas esse

boos phthimenes peplanemena tekna,

idem

hippon men spekes genea, moschon de melissai.

Apes non sunt solitaria natura, ut aquilae, sed ut homines. Quod si in hoc faciunt etiam graculi, at non idem, quod hic societas operis et aedificiorum, quod illic non est, hic ratio atque ars, ab his opus facere discunt, ab his aedificare, ab his cibaria condere. Tria enim harum: cibus, domus, opus, neque idem quod cera cibus, nec quod mel, nec quod domus. Non in favo sex angulis cella, totidem quot habet ipsa pedes? Quod geometrae hexagonon fieri in orbi rutundo ostendunt, ut plurimum loci includatur. Foris pascuntur, intus opus faciunt, quod dulcissimum quod est, et deis et hominibus est acceptum, quod favus venit in altaria et mel ad principia convivi et in secundam mensam administratur. Haec ut hominum civitates, quod hic est et rex et imperium et societas. Secuntur omnia pura. Itaque nulla harum adsidit in loco inquinato aut eo qui male oleat, neque etiam in eo qui bona olet unguenta. Itaque iis unctus qui accessit, pungunt, non, ut muscae, ligurriunt, quod nemo has videt, ut illas, in carne aut sanguine aut adipe. Ideo modo considunt in eis quorum sapor dulcis. Minime malefica, quod nullius opus vellicans facit deterius, neque ignava, ut non, qui eius conetur disturbare, resistat; neque tamen nescia suae imbecillitatis. Quae cum causa Musarum esse dicuntur volucres, quod et, si quando displicatae sunt, cymbalis et plausibus numero redducunt in locum unum; et ut his dis Heliconae atque Olympon adtribuerunt homines, sic his floridos et incultos natura adtribuit montes. Regem suum secuntur, quocumque it, et fessum sublevant, et si nequit volare, succollant, quod eum servare volunt. Neque ipsae sunt inficientes nec non oderunt inertes. Itaque insectantes ab se eiciunt fucos, quod hi neque adjuvant et mel consumunt, quos vocificantes plures persecuntur etiam paucae. Extra ostium alvi opturant omnia, qua venit inter favos spiritus, quam erithacen appellant Graeci. Omnes ut in exercitu vivunt atque alternis dormiunt et opus faciunt pariter et ut colonias mittunt, iique duces conficiunt quaedam ad vocem ut imitatione tubae. Tum id faciunt, cum inter se signa pacis ac belli habeant. Sed, O Merula, Axius noster ne, dum haec audit physica, macescat, quod de fructu nihil dixi, nunc cursu lampada tibe trado.

Merula, De fructu, inquit, hoc dico, quod fortasse an tibi satis sit, Axi, in quo auctorem habeo non solum Seium, qui alvaria sua locata habet quotannis quinis milibus pondo mellis, sed etiam hunc Varronem nostrum, quem audiui dicentem duo milites se habuisse in Hispania fratres Veianios ex agro Falisco locupletis, quibus cum a patre relicta esset parva villa et agellus non sane maior iugero uno, hos circum villam totam alvaria fecisse et hortum habuisse ac relicum thymo et cytiso opsevisse et apiastro, quod alii meliphyllon, alii melissophyllon, quidam melittaenam appellant. Hos numquam minus, ut peraeque ducerent, dena milia sestertia ex melle recipere esse solitos, cum dicerent velle exspectare, ut suo potius tempore mercatorem admitterent, quam celerius alieno. Dic igitur, inquit, ubi et cuius modi me facere oporteat alvarium, ut magnos capiam fructus. Ille, melittonas ita facere oportet, quos alii melitrophia appellant, eandem rem quidam mellaria. Primum secundum villam potissimum, ubi non resonent imagines (hic enim sonus harum fugae existimatur esse protelum), esse oportet aere temperato, neque aestate fervido neque hieme non aprico, ut spectet potissimum ad hibernos ortus, qui prope se loca habeat ea, ubi pabulum sit frequens et aqua pura. Si pabulum naturale non est, ea oportet dominum serere, quae maxime secuntur apes. Ea sunt rosa, serpyllon, apiastrum, papaver, faba, lens, pisum, ocimum, cyperum, medice, maxime cytisum, quod minus valentibus utilissimum est. Etenim ab aequinoctio verno florere incipit et permanet ad alterum aequinoctium. Sed ut hoc aptissimum ad sanitatem apium, sic ad mellificium thymum. Propter hoc Siculum mel fert palmam, quod ibi thymum bonum frequens est. Itaque quidam thymum contundunt in pila et diluunt in aqua tepida; eo conspergunt omnia seminaria consita apium causa. Quod ad locum pertinet, hoc genus potissimum eligendum iuxta villam, non quo non in villae porticu quoque quidam, quo tutius esset, alvarium collocarint. Ubi sint, alii faciunt ex viminibus rutundas, alii e ligno ac corticibus, alii ex arbore cava, alii fictiles, alii etiam ex ferulis quadratas longas pedes circiter ternos, latas pedem, sed ita, ubi parum sunt quae compleant, ut eas conangustent, in vasto loco inani ne despondeant animum. Haec omnia vocant a mellis alimonio alvos, quas ideo videntur medias facere angustissimas, ut figuram imitentur earum. Vitiles fimo bubulo oblinunt intus et extra, ne asperitate absterreantur, easque alvos ita collocant in mutulis parietis, ut ne agitentur neve inter se contingant, cum in ordinem sint positae. Sic intervallo interposito alterum et tertium ordinem infra faciunt et aiunt potius hinc demi oportere, quam addi quartum. Media alvo, qua introeant apes, faciunt foramina parva dextra ac sinistra. Ad extremam, qua mellarii favum eximere possint, opercula imponunt. Alvi optimae fiunt corticeae, deterrimae fictiles, quod et frigore hieme et aestate calore vehementissime haec commoventur. Verno tempore et aestivo fere ter in mense mellarius inspicere debet fumigans leniter eas et ab spurcitiis purgare alvum et vermiculos eicere. Praeterea ut animadvertat ne reguli plures existant; inutiles enim fiunt propter seditiones. Et quidam dicunt, tria genera cum sint ducum in apibus, niger ruber varius, ut Menecrates scribit, duo, niger

et varius, qui ita melior, ut expediat mellario, cum duo sint in eadem alvo, interficere nigrum, cum sit cum altero rege, esse seditiosum et corrumpere alvom, quod fuget aut cum multitudine fugetur. De reliquis apibus optima est parva varia rutunda. Fur qui vocabitur, ab aliis fucus, est ater et lato ventre. Vespa, quae similitudinem habet apis, neque socia est operis et nocere solet morsu, quam apes a se secernunt. Hae differunt inter se, quod ferae et cicures sunt. Nunc feras dico, quae in silvestribus locis pascitant, cicures, quae in cultis. Silvestres minores sunt magnitudine et pilosae, sed opifices magis.

In emendo emptorem videre oportet, valeant an sint aegrae. Sanitatis signa, si sunt frequentes in examine et si nitidae et si opus quod faciunt est aequabile ac leve. Minus valentium signa, si sunt pilosae et horridae, ut pulverulentae, nisi opificii eas urget tempus; tum enim propter laborem asperantur ac marcescunt. Si transferendae sunt in alium locum, id facere diligenter oportet et tempora, quibus id potissimum facias, animadvertendum et loca, quo transferas, idonea providendum: tempora, ut verno potius quam hiberno, quod hieme difficulter consuescunt quo translatae manere, itaque fugiunt plerumque. Si e bono loco transtuleris eo, ubi idonea pabulatio non sit, fugitivae fiunt. Nec, si ex alvo in alvum in eodem loco traicias, neglegenter faciendum, sed et in quam transiturae sint apes, ea apiastro perfricanda, quod inlicium hoc illis, et favi melliti intus ponendi a faucibus non longe, ne, cum animadverterint aut inopiam esse * * * habuisse dicit. Is ait, cum sint apes morbidae propter primoris vernos pastus, qui ex floribus nucis graecae et cornus fiunt, coeliacas fieri atque urina pota reficiendas. Propolim vocant, e quo faciunt ad foramen introitus protectum ante alvum maxime aestate. Quam rem etiam nomine eodem medici utuntur in emplastris, propter quam rem etiam carius in sacra via quam mel venit. Erithacen vocant, quo favos extremos inter se conglutinant, quod est aliud melle et propoli; itaque in hoc vim esse illiciendi. Quocirca examen ubi volunt considerare, eum ramum aliamve quam rem oblinunt hoc admixto apiastro. Favus est, quem fingunt multicavatum e cera, cum singula cava sena latera habeant, quot singulis pedes dedit natura. Neque quae afferunt ad quattuor res faciendas, propolim, erithacen, favum, mel, ex iisdem omnibus rebus carpere dicunt. Simplex, quod e malo punico et asparago cibum carpant solum, ex olea arbore ceram, e fico mel, sed non bonum. Duplex ministerium praebere, ut e faba, apiastro, cucurbita, brassica ceram et cibum; nec non aliter duplex quod fit e malo et piris silvestribus, cibum et mel; item aliter duplex quod e papavere, ceram et mel. Triplex ministerium quoque fieri, ut ex nuce Graeca et e lapsano cibum, mel, ceram. Item ex aliis floribus ita carpere, ut alia ad singulas res sumant, alia ad plures, nec non etiam aliud discrimen sequantur in captura aut eas sequatur, ut in melle, quod ex alia re faciant liquidum mel, ut e siseræ flore, ex alia contra spissum, ut e rore marino; sic ex alia re, ut e fico mel insuave, e cytiso bonum, e thymo optimum. Cibi pars quod potio et ea iis aqua liquida, unde bibant esse oportet, eamque propinquam, quae praeterfluat aut in aliquem lacum influat, ita ut ne altitudine escendat duo aut tres digitos; in qua

aqua iaceant testae aut lapilli, ita ut exstent paulum, ubi adsidere et bibere possint. In quo diligenter habenda cura ut aqua sit pura, quod ad mellificium bonum vehementer prodest. Quod non omnis tempestas ad pastum prodire longius patitur, praeparandus his cibis, ne tum melle cogantur solo vivere aut relinquere exinanitas alvos. Igitur ficorum pinguium circiter decem pondo decoquunt in aquae congiis sex, quas coctas in offas prope apponunt. Alii aquam mulsam in vasculis prope ut sit curant, in quae addunt lanam puram, per quam sugant, uno tempore ne potu nimium impleantur aut ne incidant in aquam. Singula vasa ponunt ad alvos, haec supplentur. Alii uvam passam et ficum cum pisierunt, affundunt sapam atque ex eo factas offas apponunt ibi, quo foras hieme in pabulum procedere tamen possint.

Cum examen exiturum est, quod fieri solet, cum adnatae prospere sunt multae ac progeniem ut coloniam emittere volunt, ut olim crebro Sabini factitaverunt propter multitudinem liberorum, huius quod duo solent praeire signa, scitur: unum, quod superioribus diebus, maxime vespertinis, multae ante foramen ut uvae aliae ex aliis pendent conglobatae; alterum, quod, cum iam evoluturae sunt aut etiam inceperunt, consonant vehementer, proinde ut milites faciunt, cum castra movent. Quae primum exierunt, in conspectu volitant reliquas, quae nondum congregatae sunt, respectantes, dum conveniant. A mellario cum id fecisse sunt animadversae, iaciundo in eas pulvere et circumtinniendo aere perterritae, quo volunt perducere, non longe inde oblinunt erithace atque apiastro ceterisque rebus, quibus delectantur. Ubi consederunt, afferunt alvum eisdem inliciis litam intus et prope apposita fumo leni circumdato cogunt eas intrare. Quae in novam coloniam cum introierunt, permanent adeo libenter, ut etiam si proximam posueris illam alvum, unde exierunt, tamen novo domicilio potius sint contentae.

Quod ad pastiones pertinere sum ratus quoniam dixi, nunc iam, quouiis causa adhibetur ea cura, de fructu dicam. Eximendorum favorum signum sumunt ex ipsis uiris alvos habeat nem congerminarit coniecturam capiunt, si intus faciunt bombum et, cum intro eunt ac foras, trepidant et si, opercula alvorum cum remoris, favorum foramina obducta videntur membranis, cum sint repleti melle. In eximendo quidam dicunt oportere ita ut novem partes tollere, decumam relinquere; quod si omne eximas, fore ut discedant. Alii hoc plus relincunt, quam dixi. Ut in aratis qui faciunt restibiles segetes, plus tollunt frumenti ex intervallis, sic in alvis, si non quotannis eximas aut non aequae multum, et magis his assiduas habeas apes et magis fructuosas. Eximendorum favorum primum putant esse tempus vergiliarum exortu, secundum aestate acta, antequam totus exoriatur arcturus, tertium post vergiliarum occasum, et ita, si fecunda sit alvos, ut ne plus tertia pars eximatur mellis, reliquum ut hiemationi relinquatur; sin alvus non sit fertilis, ne quid eximatur. Exemptio cum est maior, neque universam neque palam facere oportet, ne deficient animum. Favi qui eximuntur, siqua pars nihil habet aut habet incunatum, cultello praesicatur. Providendum ne infirmiores a valentioribus opprimantur, eo enim minuitur fructus; itaque imbecilliores

secretas subiciunt sub alterum regem. Quae crebrius inter se pugnabant, aspargi eas oportet aqua mulsa. Quo facto non modo desistunt pugna, sed etiam conferciunt se lingentes, eo magis, si mulso sunt asparsae, quo propter odorem avidius applicant se atque obstupescunt potantes. Si ex alvo minus frequentes evadunt ac subsidit aliqua pars, subfumigandum et prope apponendum bene olentium herbam maxime apiastrum et thymum. Providendum vehementer ne propter aestum aut propter frigus dispereant. Si quando subito imbri in pastu sunt oppressae aut frigore subito, antequam ipsae providerint id fore, quod accidit raro ut decipiantur, et imbris guttis uberibus offensae iacent prostratae, ut efflictae, colligendum eas in vas aliquod et reponendum in tecto loco ac tepido, proximo die quam maxime tempestate bona cinere facto e ficulneis lignis infriandum paulo plus caldo quam tepidiore. Deinde concutiendum leviter ipso vaso, ut manu non tangas, et ponendae in sole. Quae enim sic concaluerunt, restituunt se ac revivescunt, ut solet similiter fieri in muscis aqua necatis. Hoc faciendum secundum alvos, ut reconciliatae ad suum quaeque opus et domicilium redeant.

XVII.

Interea redit ad nos Pavo et, Si vultis, inquit, ancoras tollere, latis tabulis sortitio fit tribuum, ac coepti sunt a praecone recini, quem quaeque tribus fecerit aedilem. Appius confestim surgit, ut ibidem candidato suo gratularetur ac discederet in hortos. Merula, Tertium actum de pastionibus villaticis postea, inquit, tibi reddam, Axi. Consurgentibus illis, Axis mihi respectantibus nobis, quod et candidatum nostrum venturum sciebamus, Non laboro, inquit, hoc loco discessisse Merulam. Reliqua enim fere mihi sunt nota, quod, cum piscinarum genera sint duo, dulcium et salsarum, alterum apud plebem et non sine fructu, ubi Lymphae aquam piscibus nostris villaticis ministrant; illae autem maritimae piscinae nobilium, quibus Neptunus ut aquam et piscis ministrat, magis ad oculos pertinent, quam ad vesicam, et potius marsippium domini exinaniunt, quam implent. Primum enim aedificantur magno, secundo implentur magno, tertio aluntur magno. Hirrus circum piscinas suas ex aedificiis duodena milia sestertia capiebat. Eam omnem mercedem escis, quas dabat piscibus, consumebat. Non mirum; uno tempore enim memini hunc Caesari duo milia murenarum mutua dedisse in pondus et propter piscium multitudinem quadragies sestertio villam venisse. Quae nostra piscina mediterranea ac plebeia recte dicitur dulcis et illa amara; quis enim nostrum non una contentus est hac piscina? Quis contra maritimas non ex piscinis singulis coniunctas habet pluris? Nam ut Pausias et ceteri pictores eiusdem generis loculatas magnas habent arculas, ubi discolores sint cerae, sic hi loculatas habent piscinas, ubi dispares disclusos habeant pisces, quos, proinde ut sacri sint ac sanctiores quam illi in Lydia, quos sacrificanti tibi, Varro, ad tibicinem gregatim venisse dicebas ad extremum litus atque aram, quod eos capere auderet nemo, cum eodem tempore insulas Lydorum ibi choreuousas vidisses, sic hos piscis nemo cocus in ius vocare audet. Quintus Hortensius,

familiaris noster, cum piscinas haberet magna pecunia aedificatas ad Baulos, ita saepe cum eo ad villam fui, ut illum sciam semper in cenam pisces Puteolos mittere emptum solitum. Neque satis erat eum non pasci e piscinis, nisi etiam ipse eos pasceret ultro ac maiorem curam sibi haberet, ne eius esurirent nulli, quam ego habeo, ne mei in Rosea esuriant asini, et quidem utraque re, et cibo et potione, cum non paulo sumptuosius, quam ego, ministraret victum. Ego enim uno servulo, hordeo non multo, aqua domestica meos multinummos alo asinos; Hortensius primum qui ministrarent piscatores habebat complures, et ei pisciculos minutos aggerebant frequenter, qui a maioribus absumerentur. Praeterea salsamentorum in eas piscinas emptum coiciebat, cum mare turbaret ac per tempestatem macellum piscinarum obsonium praeberet neque everriculo in litus educere possent vivam saginam, plebeiae cenae piscis. Celerius voluntate Hortensi ex equili educeres redarias, ut tibi haberes, mulas, quam e piscina barbatum mullum. Atque, ille inquit, non minor cura erat eius de aegrotis piscibus, quam de minus valentibus servis. Itaque minus laborabat ne servos aeger aquam frigidam, quam ut recentem biberent sui pisces. Etenim hac incuria laborare aiebat M. Lucullum ac piscinas eius despiciebat, quod aestuaria idonea non haberet, ac reside aqua in locis pestilentibus habitarent pisces eius; contra ad Neapolim L. Lucullum, posteaquam perfodisset montem ac maritimum flumen immisisset in piscinas, qui reciproce fluerent ipsae, Neptuno non cedere de piscatu. Factum esse enim ut amicos pisces suos videatur propter aestus eduxisse in loca frigidiora, ut Apuli solent pecuarii facere, qui per calles in montes Sabinos pecus ducunt. In Baiano autem aedificans tanta ardebat cura, ut architecto permiserit vel ut suam pecuniam consumeret, dummodo perduceret specus e piscinis in mare obiecta mole, qua aestus bis cotidie ab exorta luna ad proximam novam introire ac redire rursus in mare posset ac refrigerare piscinas.

Nos haec. At strepitus ab dextra et cum lata candidatus noster designatus aedilis in villam. Cui nos occedimus et gratulati in Capitolium persequimur. Illi inde endo suam domum, nos nostram, o Pinni noster, sermone de pastione villatica summatim hoc, quem exposui, habito.

On the Latin Language

LIBER V

I.

Quemadmodum vocabula essent imposita rebus in lingua Latina, sex libris exponere institui. De his tris ante hunc feci quos Septumio misi: in quibus est de disciplina, quam vocant etymologiken: quae contra eam dicerentur, volumine primo, quae pro ea, secundo, quae de ea, tertio. In his ad te scribam, a quibus rebus vocabula imposita sint in lingua Latina, et ea quae sunt in consuetudine apud populum et ea quae inveniuntur apud poetas.

Cum unius cuiusque verbi naturae sint duae, a qua re et in qua re vocabulum sit impositum (itaque a qua re sit pertinacia cum requiritur, ostenditur esse a pertendendo; in qua re sit impositum dicitur cum demonstratur, in quo non debet pertendi et pertendit, pertinaciam esse, quod in quo oporteat manere, si in eo perstet, perseverantia sit), priorem illam partem, ubi cur et unde sint verba scrutantur, Graeci vocant etymologian, illam alteram peri semainomenon. De quibus duabus rebus in his libris promiscue dicam, sed exilius de posteriore.

Quae ideo sunt obscuriora, quod neque omnis impositio verborum exstat, quod vetustas quasdam delevit, nec quae exstat sine mendo omnis imposita, nec quae recte est imposita, cuncta manet (multa enim verba litteris commutatis sunt interpolata), neque omnis origo est nostrae linguae e vernaculis verbis, et multa verba aliud nunc ostendunt, aliud ante significabant, ut hostis: nam tum eo verbo dicebant peregrinum qui suis legibus uteretur, nunc dicunt eum quem tum dicebant perduellem.

In quo genere verborum aut casu erit illustrius unde videri possit origo, inde repetam. Ita fieri oportere apparet, quod recto casu quom, dicimus inpos, obscurius est esse a potentia quam cum dicimus inpotem; et eo obscurius fit, si dicas pos quam inpos: videtur enim pos significare potius pontem quam potentem.

Vetustas pauca non depravat, multa tollit. Quem puerum vidisti formosum, hunc vides deformem in senecta. Tertium seculum non videt eum hominem quem vidit primum. Quare illa quae iam maioribus nostris ademit oblivio, fugitiva secuta sedulitas Muci et Bruti retrahere nequit. Non, si non potuero indagare, eo ero tardior, sed velocior ideo, si quivero. Non mediocres enim tenebrae in silva ubi haec captanda neque eo quo pervenire volumus semitae tritae, neque non in tramtibus quaedam obiecta quae euntem retinere possent.

Quorum verborum novorum ac veterum discordia omnis in consuetudine communi, quot modis commutatio sit facta qui animadverterit, facilius scrutari origines patietur verborum: reperiet enim esse commutata, ut in superioribus libris ostendi, maxime propter bis quaternas causas. Litterarum enim fit demptione aut additione et propter earum traiectionem aut commutationem, item syllabarum productione aut correptione, denique adiectione aut detrectione; quae quoniam in superioribus libris cuiusmodi

essent exemplis satis demonstravi, hic ammonendum esse modo putavi.

Nunc singulorum uerborum origines expediam, quorum quattuor explanandi gradus. Infimus quo populus etiam venit: quis enim non videt unde argentifodinae et viocurus? Secundus quo grammatica escendit antiqua, quae ostendit, quemadmodum quodque poeta finxerit uerbum, quod confinxerit, quod declinarit; hic Pacui:

Rudentum sibilus,

hic:

Incurvicervicum pecus,

hic:

Clamide clupeat bracchium.

Tertius gradus, quo philosophia ascendens pervenit atque ea quae in consuetudine communi essent aperire coepit, ut a quo dictum esset oppidum, vicus, via. Quartus, ubi est adytum et initia regis: quo si non perveniam ad scientiam, at opinionem aucupabor, quod etiam in salute nostra nonnunquam facit cum aegrotamus medicus.

Quodsi summum gradum non attigero, tamen secundum praeteribo, quod non solum ad Aristophanis lucernam, sed etiam ad Cleanthis lucubravi. Volui praeterire eos, qui poetarum modo verba ut sint ficta expediunt. Non enim videbatur consentaneum quaerere me in eo verbo quod finxisset Ennius causam, neglegere quod ante rex Latinus finxisset, cum poeticis multis verbis magis delecter quam utar, antiquis magis utar quam delecter. An non potius mea verba illa quae hereditate a Romulo rege venerunt quam quae a poeta Livio relicta?

Igitur quoniam in haec sunt tripartita verba, quae sunt aut nostra aut aliena aut oblivia, de nostris dicam cur sint, de alienis unde sint, de obliviis relinquam: quorum partim quid tamen invenerim aut opiner scribam. In hoc libro dicam de vocabulis locorum et quae in his sunt, in secundo de temporum et quae in his fiunt, in tertio de utraque re a poetis comprehensa.

Pythagoras Samius ait omnium rerum initia esse bina ut finitum et infinitum, bonum et malum, vitam et mortem, diem et noctem. Quare item duo status et motus, utrumque quadripartitum: quod stat aut agitur, corpus, ubi agitur, locus, dum agitur, tempus, quod est in agitatu, actio. Quadripartitio magis sic apparebit: corpus est ut cursor, locus stadium qua currit, tempus hora qua currit, actio cursio.

Quare fit, ut ideo fere omnia sint quadripartita et ea aeterna, quod neque unquam tempus, quin fuerit motus: eius enim intervallum tempus; neque motus, ubi non locus et corpus, quod alterum est quod movetur, alterum ubi; neque ubi is agitatus, non actio ibi. Igitur initiorum quadrigae locus et corpus, tempus et actio.

Quare quod quattuor genera prima rerum, totidem verborum: e quis de locis et iis rebus quae in his videntur in hoc libro summatim ponam. Sed qua cognatio eius erit verbi quae radices egerit extra fines suas, persequemur.

Saepe enim ad limitem arboris radices sub vicini prodierunt segetem. Quare non, cum de locis dicam, si ab agro ad agrarium, hominem, ad agricolam pervenero, aberraro. Multa societas uerborum, nec Vinalia sine uino expediri nec Curia Calabra sine calatione potest aperiri.

II.

Incipiam de locis ab ipsius loci origine. Locus est, ubi locatum quid esse potest, ut nunc dicunt, collocatum. Veteres id dicere solitos apparet apud Plautum:

Filiam habeo grandem dote cassam atque inlocabilem
Neque eam queo locare cuiquam.

Apud Ennium:

O Terra Thraeca, ubi Liberi fanum inclutum
Maro locavit.

Ubi quidque consistit, locus. Ab eo praeco dicitur locare, quod usque idem it, quoad in aliquo constitit pretium. Inde locarium quod datur in stabulo et taberna, ubi consistent. Sic loci muliebres, ubi nascendi initia consistent.

III.

Loca naturae secundum antiquam divisionem prima duo, terra et caelum, deinde particulatim utriusque multa. Caeli dicuntur loca supera et ea deorum, terrae loca infera et ea hominum. Ut Asia sic caelum dicitur modis duobus. Nam et Asia, quae non Europa, in quo etiam Syria, et Asia dicitur prioris pars Asiae, in qua est Ionia ac provincia nostra.

Sic caelum et pars eius, summum ubi stellae, et id quod Pacuvius cum demonstrat dicit:

Hoc vide circum supraque quod complexu continet Terram.

Cui subiungit:

Id quod nostri caelum memorant.

A qua bipertita divisione Lucilius suorum unius et viginti librorum initium fecit hoc:

Aetheris et terrae genitabile quaerere tempus.

Caelum dictum scribit Aelius, quod est caelatum, aut contrario nomine, celatum quod apertum est; non male, quod impositor, multo potius caelare a caelo quam caelum a caelando. Sed non minus illud alterum de celando ab eo potuit dici, quod interdiu celatur, quam quod noctu non celatur.

Omnino ego magis puto a *chao choum cavum* et hinc caelum, quoniam, ut dixi, “hoc circum supraque quod complexu continet terram,” cavum caelum. Itaque dicit Andromeda Nocti:

Quae cava caeli

Signitinentibus conficis bigis;
et Agamemno:
In altisono caeli clipeo:
cavum enim clipeum; et Ennius item ad cavationem:
Caeli ingentes fornices.

Quare ut a cavo cavea et caullae et convallis, cavata vallis, et cavernae a cavatione ut cavum, sic ortum, unde omnia apud Hesiodum, a chao cavo caelum.

IV.

Terra dicta ab eo, ut Aelius scribit, quod teritur. Itaque tera in augurum libris scripta cum R uno. Ab eo colonis locus communis qui prope oppidum relinquitur teritorium, quod maxime teritur. Hinc linteum quod teritur corpore extermentarium. Hinc in messi tritura, quod tum frumentum teritur, et tribulum, qui teritur. Hinc fines agrorum termini, quod eae partes propter limitare iter maxime teruntur; itaque hoc cum I in Latio aliquot locis dicitur, ut apud Accium, non terminus, sed terimen; hoc Graeci quod termona. Pote vel illinc; Euander enim, qui venit in Palatium, e Graecia Arcas.

Via quidem iter, quod ea vehendo teritur, iter item actus, quod agendo teritur; etiam ambitus iter, quod circumeundo teritur: nam ambitus circuitus; ab eoque Duodecim Tabularum interpretes “ambitus parietis” circuitum esse describunt. Igitur tera terra et ab eo poetae appellarunt summa terrae quae sola teri possunt, “sola terrae.”

Terra, ut putant, eadem et humus; ideo Ennium in terram cadentis dicere:

Cubitis pinsibant humum;
et quod terra sit humus, ideo is humatus mortuus, qui terra obrutus; ab eo qui Romanus combustus est, si in sepulcrum, eius abiecta gleba non est aut si os exceptum est mortui ad familiam purgandam, donec in purgando humo est opertum (ut pontifices dicunt, quod inhumatus sit), familia funesta manet. Et dicitur humilior, qui ad humum, demissior, infimus humillimus, quod in mundo infima humus.

Humor hinc. Itaque ideo Lucilius:

Terra abiit in nimbos humoremque.
Pacuvius:
Terra exhalat auram atque auroram humidam;
humidam humectam; hinc ager uliginosus humidissimus; hinc udus uvidus;
hinc sudor et udor.

Is si quamvis deorsum in terra, unde sumi pote, puteus; nisi potius quod Aeolis dicebant ut pytamón sic pyteon a potu, non ut nunc phrear. A puteis oppidum ut Puteoli, quod incircum eum locum aquae frigidae et caldae multae, nisi a putore potius, quod putidus odoribus saepe ex sulphure et

alumine. Extra oppida a puteis puticuli, quod ibi in puteis obruebantur homines, nisi potius, ut Aelius scribit, puticuli quod putescabant ibi cadavera proiecta, qui locus publicus ultra Esquilias. Itaque eum Afranius putilucos in Togata appellat, quod inde suspiciunt per puteos lumen.

Lacus lacuna magna, ubi aqua contineri potest. Palus paululum aquae in altitudinem et palam latius diffusae. Stagnum a Graeco, quod *ii stegnon* quod non habet rimam. Hinc ad villas rutunda stagna, quod rutundum facillime continet, anguli maxime laborant.

Fluvius, quod fluit, item flumen: a quo lege praediorum urbanorum scribitur:

Stillicidia fluminaque uti nunc, ut ita cadant fluantque;
inter haec hoc interest, quod stillicidium eo quod stillatim cadit, flumen quod fluit continue.

Amnis id flumen quod circuit aliquod: nam ab ambitu amnis. Ab hoc qui circum Aternum habitant, Aminterni appellati. Ab eo qui populum candidatus circum it, ambit, et qui aliter facit, indagabili ex ambitu causam dicit. Itaque Tiberis amnis, quod ambit Martium Campum et urbem; oppidum Interamna dictum, quod inter amnis est constitutum; item Antemnae, quod ante amnis, qua Anio influit in Tiberim, quod bello male acceptum consenuit.

Tiberis quod caput extra Latium, si inde nomen quoque exfluit in linguam nostram, nihil ad etymologon Latinum, ut, quod oritur ex Samnio, Volturnus nihil ad Latinam linguam: at quod proximum oppidum ab eo secundum mare Volturnum, ad nos, iam Latinum vocabulum, ut Tiberinus nomen. Et colonia enim nostra Volturnum et deus Tiberinus.

Sed de Tiberis nomine anceps historia. Nam et suum Etruria et Latium suum esse credit, quod fuerunt qui ab Thebri vicino regulo Veientum, dixerint appellatum, primo Thebrim. Sunt qui Tiberim priscum nomen Latinum Albulam vocitatum litteris tradiderint, posterius propter Tiberinum regem Latinorum mutatum, quod ibi interierit: nam hoc eius ut tradunt sepulcrum.

V.

Ut omnis natura in caelum et terram divisa est, sic caeli regionibus terra in Asiam et Europam. Asia enim iacet ad meridiem et austrum, Europa ad septentriones et aquilonem. Asia dicta ab nympha, a qua et Iapeto traditur Prometheus. Europa ab Europa Agenoris, quam ex Phoenice, Manlius scribit taurum exportasse, quorum egregiam imaginem ex aere Pythagoras Tarenti.

Europae loca multae incolunt nationes. Ea fere nominata aut translaticio nomine ab hominibus ut Sabini et Lucani, aut declinato ab hominibus, ut Apulia et Latium, aut utrumque, ut Etruria et Tusci. Qua regnum fuit Latini, universus ager dictus Latius, particulatim oppidis cognominatus, ut a Praeneste Praenestinus, ab Aricia Aricinus.

Ut nostri augures publici disserunt, agrorum sunt genera quinque: Romanus, Gabinus, peregrinus, hosticus, incertus. Romanus dictus unde Roma ab Romulo; Gabinus ab oppido Gabiis; peregrinus ager pacatus, qui

extra Romanum et Gabinum, quod uno modo in his servantur auspicia; dictus peregrinus a pergendo, id est a progrediendo: eo enim ex agro Romano primum progrediebantur: quocirca Gabinus quoque peregrinus, sed quod auspicia habet singularia, ab reliquo discretus; hosticus dictus ab hostibus; incertus is, qui de his quattuor qui sit ignoratur.

VI.

Ager dictus in quam terram quid agebant, et unde quid agebant fructus causa; alii, quod id Graeci dicunt agron. Ut ager quo agi poterat, sic qua agi actus. Eius finis minimus constitutus in latitudinem pedes quattuor (fortasse an ab eo quattuor, quod ea quadrupes agitur); in longitudinem pedes centum viginti; in quadratum actum et latum et longum esset centum viginti. Multa antiqui duodenario numero finierunt ut duodecim decuriis actum.

Iugerum dictum iunctis duobus actibus quadratis. Centuria primum a centum iugeribus dicta, post duplicata retinuit nomen, ut tribus a partibus, populi tripartito divisi dictae nunc multiplicatae idem tenent nomen. Ut qua agebant actus, sic qua vehebant, viae dictae; quo fructus convehebant, villae. Qua ibant, ab itu iter appellarunt; qua id anguste, semita, ut semiter dictum.

Ager cultus ab eo quod ibi cum terra semina coalescebant, et ubi non consitus incultus. Quod primum ex agro plano fructus capiebant, campus dictus; posteaquam proxima superiora loca colere coeperunt, a colendo colles appellarunt; quos agros non colebant propter silvas aut id genus, ubi pecus possit pasci, et possidebant, ab usu salvo saltus nominarunt. Haec etiam Graeci neme, nostri nemora.

Ager quod videbatur pecudum ac pecuniae esse fundamentum, fundus dictus, aut quod fundit quotquot annis multa. Vineta ac vineae a vite multa. Vitis a vino, id a vi; hinc vindemia, quod est vinidemia aut vitidemia. Seges ab satu, id est semine. Semen, quod non plane id quod inde; hinc seminaria, sementes, item alia. Quod segetes ferunt, fruges, a fruendo fructus, a spe spicae, ubi et culmi, quod in summo campo nascuntur et summum culmen.

Ubi frumenta secta, ut terantur, arescunt, area. Propter horum similitudinem in urbe loca pura areae; a quo potest etiam ara deum, quod pura, nisi potius ab ardore, ad quem ut sit fit ara; a quo ipsa area non abest, quod qui arefacit ardor est solis.

Ager restibilis, qui restituitur ac reseritur quotquot annis; contra qui intermittitur, a novando novalis ager. Arvus et arationes ab arando; ab eo quod aratri vomer sustulit, sulcus; quo ea terra iacta, id est proiecta, porca.

Prata dicta ab eo, quod sine opere parata. Quod in agris quotquot annis rursum, facienda eadem, ut rursum capias fructus, appellata rura. Dividi tamen esse ius scribit Sulpicius plebei rura largiter ad adorem. Praedia dicta, item ut praedes, a praestando, quod ea pignore data publice mancuspis fidem praestent.

VII.

Ubi nunc est Roma, Septimontium nominatum ab tot montibus quos postea urbs muris comprehendit; e quis Capitolinum dictum, quod hic, cum fundamenta foderentur aedis Iovis, caput humanum dicitur inventum. Hic mons ante Tarpeius dictus a virgine Vestale Tarpeia, quae ibi ab Sabinis necata armis et sepulta: cuius nominis monumentum relictum, quod etiam nunc eius rupes Tarpeium appellatur saxum.

Hunc antea montem Saturnium appellatum prodiderunt et ab eo Latium Saturniam terram, ut etiam Ennius appellat. Antiquum oppidum in hoc fuisse Saturniam scribitur. Eius vestigia etiam nunc manent tria, quod Saturni fanum in faucibus, quod Saturnia Porta quam Iunius scribit ibi, quam nunc vocant Pandanam, quod post aedem Saturni in aedificiorum legibus privatis parietes postici “muri Saturnii” sunt scripti.

Aventinum aliquot de causis dicunt. Naevius ab avibus, quod eo se ab Tiberi ferrent aves, alii ab rege Aventino Albano, quod ibi sit sepultus, alii Adventinum ab adventu hominum, quod commune Latinorum ibi Dianae templum sit constitutum. Ego maxime puto, quod ab advectione: nam olim paludibus mons erat ab reliquis disclusus. Itaque eo ex urbe advehebantur ratibus, cuius vestigia, quod ea qua tum advectionem dicitur Velabrum, et unde escendebant ad infimam Novam Viam locus sacellum Velabrum.

Velabrum a vehendo. Velaturam facere etiam nunc dicuntur qui id mercede faciunt. Merces (dicitur a merendo et aere) huic vecturae qui ratibus transibant quadrans. Ab eo Lucilius scripsit:

Quadrantis ratiti.

VIII.

Reliqua urbis loca olim discreta, cum Argeorum sacraria septem et viginti in quattuor partis urbis sunt disposita. Argeos dictos putant a principibus, qui cum Hercule Argivo venerunt Romam et in Saturnia subsederunt. E quis prima scripta est regio Suburana, secunda Esquilina, tertia Collina, quarta Palatina.

In Suburanae regionis parte princeps est Caelius mons a Caele Vibenna, Tusco duce nobili, qui cum sua manu dicitur Romulo venisse auxilio contra Tatium regem. Hinc post Caelis obitum, quod nimis munita loca tenerent neque sine suspitione essent, deducti dicuntur in planum. Ab eis dictus Vicus Tuscus, et ideo ibi Vortumnus stare, quod is deus Etruriae princeps; de Caelianis qui a suspitione liberi essent, traductos in eum locum qui vocatur Caeliolum.

Cum Caelio coniunctum Carinae et inter eas quem locum Caeriolensem appellatum apparet, quod primae regionis quartum sacrarium scriptum sic est:

Caeriolensis: quarticeps circa Minervium qua in Caelium montem

itur: in tabernola est.

Caeriolensis a Carinarum iunctu dictus; Carinae pote a caerimonia, quod hinc oritur caput Sacrae Viae ab Streniae sacello quae pertinet in arcem, qua sacra quotquot mensibus feruntur in arcem et per quam augures ex arce profecti solent inaugurare. Huius Sacrae Viae pars haec sola volgo nota, quae est a Foro eunti primore clivo.

Eidem regioni adtributa Subura, quod sub muro terreo Carinarum; in eo est Argeorum sacellum sextum. Suburam Iunius scribit ab eo, quod fuerit sub antiqua urbe; cui testimonium potest esse, quod subest ei loco qui terreus murus vocatur. Sed ego a pago potius Succusano dictam puto Succusam: quod in nota etiam nunc scribitur SVC tertia littera C, non B. Pagus Succusanus, quod succurrit Carinis.

Secundae regionis Esquiliae. Alii has scripserunt ab excubiis regis dictas, alii ab eo quod aesculis excultae a rege Tullio essent. Huic origini magis concinunt loca vicina, quod ibi lucus dicitur Facutalis et Larum Querquetulanum sacellum et lucus Mefitis et Iunonis Lucinae, quorum angusti fines. Non mirum: iam diu enim late avaritia una domina est.

Esquiliae duo montes habiti, quod pars Oppius pars Cespius mons suo antiquo nomine etiam nunc in sacris appellatur. In Sacris Argeorum scriptum sic est:

Oppius Mons: princeps Esquiliis uls lucum Facutalem; sinistra via secundum moerum est.

Oppius Mons: terticeps cis lucum Esquilinum; dexteriore via in tabernola est.

Oppius Mons: quarticeps cis lucum Esquilinum; via dexteriore in figlinis est.

Cespius Mons: quinticeps cis lucum Poetelium; Esquiliis est.

Cespius Mons: sexticeps apud aedem Iunonis Lucinae, ubi aeditumus habere solet.

Tertiae regionis colles quinque ab deorum fanis appellati, e quis nobiles duo. Collis Viminalis a Iove Viminio, quod ibi ara eius. Sunt qui, quod ibi vimineta fuerint. Collis Quirinalis, quod ibi Quirini fanum. Sunt qui a Quiritibus, qui cum Tatio Curibus venerunt ad Romam, quod ibi habuerint castra.

Quod vocabulum coniunctarum regionum nomina oblitteravit. Dictos enim colles pluris apparet ex Argeorum Sacrificiis, in quibus scriptum sic est:

Collis Quirinalis: terticeps cis aedem Quirini.

Collis Salutaris: quarticeps adversum est Apollinar cis aedem Salutis.

Collis Mucialis: quinticeps apud aedem Dei Fidi; in delubro, ubi aeditumus habere solet.

Collis Latiaris: sexticeps in Vico Insteiano summo, apud auguraculum; aedificium solum est.

Horum deorum arae, a quibus cognomina habent, in eius regionis partibus sunt.

Quartae regionis Palatium, quod Pallantes cum Euandro venerunt, qui et Palatini; alii quod Palatini, aborigines ex agro Reatino, qui appellatur Palatium, ibi consederunt; sed hoc alii a Palanto uxore Latini putarunt. Eundem hunc locum a pecore dictum putant quidam; itaque Naevius Balatium appellat.

Huic Cermalum et Velias coniunxerunt, quod in hac regione scriptum est:

Germalense: quinticeps apud aedem Romuli.

Et

Veliense: sexticeps in Velia apud aedem deum Penatium.

Germalum a germanis Romulo et Remo, quod ad ficum ruminalem, et ii ibi inventi, quo aqua hiberna Tiberis eos detulerat in alveolo expositos. Veliae unde essent plures accepi causas, in quis quod ibi pastores Palatini ex ovibus ante tonsuram inventam vellere lanam sint soliti, a quo vellera dicuntur.

IX.

Ager Romanus primum divisus in partis tris, a quo tribus appellata Titiensium, Ramnium, Lucerum. Nominatae, ut ait Ennius, Titienses ab Tatio, Ramnenses ab Romulo, Luceres, ut Iunius, ab Lucumone; sed omnia haec vocabula Tusca, ut Volnius, qui tragoedias Tuscas scripsit, dicebat.

Ab hoc partes quoque quattuor urbis tribus dictae, ab locis Suburana, Palatina, Esquilina, Collina; quinta, quod sub Roma, Romilia; sic reliquae triginta ab his rebus quibus in Tribuum Libro scripsi.

X.

Quod ad loca quaeque his coniuncta fuerunt, dixi; nunc de his quae in locis esse solent immortalia et mortalia expediam, ita ut prius quod ad deos pertinet dicam. Principes dei Caelum et Terra. Hi dei idem qui Aegypti Serapis et Isis, etsi Harpocrates digito significat, ut taceam. Idem principes in Latio Saturnus et Ops.

Terra enim et Caelum, ut Samothracum, initia docent, sunt dei magni, et hi quos dixi multis nominibus, non quas Samothracia ante portas statuit duas virilis species aeneas dei magni, neque ut volgus putat, hi Samothraces dii, qui Castor et Pollux, sed hi mas et femina et hi quos Augurum Libri scriptos habent sic “divi potes,” pro illo quod Samothraces Theoi dynatoi.

Haec duo Caelum et Terra, quod anima et corpus. Humidum et frigidum terra, sive

Ova parere solet genus pennis condecoratum,

Non animam,

ut ait Ennius, et

Post inde venit divinitus pullis
Ipsa anima,
sive, ut Zenon Citieus,
Animalium semen ignis is qui anima ac mens.
Qui caldor e caelo, quod huic innumerabiles et immortales ignes. Itaque
Epicharmus cum dicit de mente humana ait
Istic est de sole sumptus ignis;
idem de sole:
Isque totus mentis est,
ut humores frigidae sunt humi, ut supra ostendi.

Quibus iuncti Caelum et Terra omnia ex se genuerunt, quod per hos
natura Frigori miscet calorem atque humori aritudinem.
Recte igitur Pacuius quod ait
Animam aether adiugat,
et Ennius
 terram corpus quae dederit, ipsam
 capere, neque dispendi facere hilum.
Animae et corporis discessus quod natis is exitus, inde exitium, ut cum in
unum ineunt, initia.

Inde omne corpus, ubi nimius ardor aut humor, aut interit aut, si manet,
sterile. Cui testis aestas et hiems, quod in altera aer ardet et spica aret, in altera
natura ad nascenda cum imbre et frigore luctare non volt et potius ver
expectat. Igitur causa nascendi duplex: ignis et aqua. Ideo ea nuptiis in limine
adhibentur, quod coniungitur hic, et mas ignis, quod ibi semen, aqua femina,
quod fetus ab eius humore, et horum vinctionis vis Venus.

Hinc comicus:
 Huic victrix Venus, videsne haec?
Non quod vincere velit Venus, sed vincere. Ipsa Victoria ab eo quod superati
vinciuntur. Utrique testis poesis, quod et Victoria et Venus dicitur caeligena:
Tellus enim quod prima vincta Caelo, Victoria ex eo. Ideo haec cum corona et
palma, quod corona vinculum capitis et ipsa a vinctura dicitur vieri, id est
vinciri; a quo est in Sota Enni:
 Ibant malaci viere Veneriam corollam.
Palma, quod ex utraque parte natura vincta habet paria folia.

Poetae de Caelo quod semen igneum cecidisse dicunt in mare ac natam “e
spumis” Venerem, coniunctione ignis et humoris, quam habent vim significant
esse Veneris. A qua vi natis dicta vita et illud a Lucilio:
 Vis est vita, vides, vis nos facere omnia cogit.

Quare quod caelum principium, ab satu est dictus Saturnus, et quod ignis,
Saturnalibus cerei superioribus mittuntur. Terra Ops, quod hic omne opus et

haec opus ad vivendum, et ideo dicitur Ops mater, quod terra mater. Haec enim
Terris gentis omnis peperit et resumit denuo,
quae
Dat cibaria,
ut ait Ennius, quae
Quod gerit fruges, Ceres;
antiquis enim quod nunc G C.

Idem hi dei Caelum et Terra Iupiter et Iuno, quod ut ait Ennius:
Istic est is Iupiter quem dico, quem Graeci vocant
Aerem, qui ventus est et nubes, imber postea,
Atque ex imbre frigus, ventus post fit, aer denuo.
Haece propter Iupiter sunt ista quae dico tibi,
Qui mortalis, arva atque urbes beluasque omnis iuvat.

Quod hinc omnes et sub hoc, eundem appellans dicit:

Divumque hominumque pater rex.

Pater, quod patefacit semen: nam tum esse conceptum patet, inde cum exit
quod oritur.

Hoc idem magis ostendit antiquius Iovis nomen: nam olim Diovis et
Diespiter dictus, id est dies pater; a quo dei dicti qui inde, et dius et divum,
unde sub divo, Dius Fidius. Itaque inde eius perforatum tectum, ut ea videatur
divum, id est caelum. Quidam negant sub tecto per hunc deierare oportere.
Aelius Dium Fidium dicebat Diovis filium, ut Graeci Dioskopon Castorem, et
putabat hunc esse Sancum ab Sabina lingua et Herculem a Graeca. Idem hic
Dis pater dicitur infimus, qui est coniunctus terrae, ubi omnia ut oriuntur ita
aboriuntur; quorum quod finis ortuum, Orcus dictus.

Quod Iovis Iuno coniunx et is Caelum, haec Terra, quae eadem Tellus, et ea
dicta, quod una iuvat cum Iove, Iuno, et Regina, quod huius omnia terrestria.

Sol vel quod ita Sabini, vel quod solus ita lucet, ut ex eo deo dies sit. Luna,
vel quod sola lucet noctu. Itaque ea dicta Noctiluca in Palatio: nam ibi noctu
lucet templum. Hanc ut Solem Apollinem quidam Dianam vocant (Apollinis
vocabulum Graecum alterum, alterum Latinum), et hinc quod luna in
altitudinem et latitudinem simul it, Diviana appellata. Hinc Epicharmus Ennii
Proserpinam quoque appellat, quod solet esse sub terris. Dicta Proserpina,
quod haec ut serpens modo in dexteram modo in sinistram partem late
movetur. Serpere et proserpere idem dicebant, ut Plautus quod scribit:

Quasi proserpens bestia.

Quae ideo quoque videtur ab Latinis Iuno Lucina dicta vel quod est et
Terra, ut physici dicunt, et lucet; vel quod ab luce eius qua quis conceptus est
usque ad eam, qua partus quis in lucem, luna iuvat, donec mensibus actis
produxit in lucem, ficta ab iuvando et luce Iuno Lucina. A quo parientes eam
invocant: luna enim nascentium dux quod menses huius. Hoc vidisse antiquas

apparet, quod mulieres potissimum supercilia sua attribuerunt ei deae. Hic enim debuit maxime collocari Iuno Lucina, ubi ab diis lux datur oculis.

Ignis a gnascendo, quod hinc nascitur et omne quod nascitur ignis succendit; ideo calet, ut qui denascitur cum amittit ac frigescit. Ab ignis iam maiore vi ac violentia Volcanus dictus. Ab eo quod ignis propter splendorem fulget, fulgur et fulmen, et fulguritum quod fulmine ictum.

In contrariis diis, ab aquae lapsu lubrico lymphæ. Lymphæ Iuturna quæ iuaret: itaque multi aegroti propter id nomen hinc aquam petere solent. A fontibus et fluminibus ac ceteris aquis dei, ut Tiberinus ab Tiberi, et ab lacu Velini Velinia, et Lymphæ Commotiles ad lacum Cutiliensem a commotu, quod ibi insula in aqua commovetur.

Neptunus, quod mare terras obnubit ut nubes caelum, ab nuptu, id est opertione, ut antiqui, a quo nuptiæ, nuptus dictus. Salacia Neptuni ab salo. Venilia a veniendo ac vento illo, quem Plautus dicit:

Quod ille dixit qui secundo vento vectus est
Tranquillo mari, ventum gaudeo.

Bellona ab bello nunc, quæ Duellona a duello. Mars ab eo quod maribus in bello praeest, aut quod Sabinis acceptus ibi est Mamers. Quirinus a Quiritibus. Virtus ut viritus a virilitate. Honos ab onere: itaque honestum dicitur quod oneratum, et dictum:

Onus est honos qui sustinet rem publicam.

Castoris nomen Graecum, Pollucis a Graecis; in Latinis litteris veteribus nomen quod est, inscribitur ut Polydeukes Polluces, non ut nunc Pollux. Concordia a corde congruente.

Feronia, Minerva, Novensides a Sabinis. Paulo aliter ab eisdem dicimus haec: Palem, Vestam, Salutem, Fortunam, Fontem, Fidem. Et arae Sabinum linguam olent, quæ Tati regis voto sunt Romæ dedicatae: nam, ut annales dicunt, vovit Opi, Florae, Vediovi Saturnoque, Soli, Lunae, Volcano et Summano, itemque Larundae, Termino, Quirino, Vortumno, Laribus, Dianae Lucinaeque; e quis nonnulla nomina in utraque lingua habent radices, ut arbores quæ in confinio natae in utroque agro serpunt: potest enim Saturnus hic de alia causa esse dictus atque in Sabinis, et sic Diana, de quibus supra dictum est.

XI.

Quod ad immortalis attinet, haec; deinceps quod ad mortalis attinet videamus. De his animalia in tribus locis quod sunt, in aere, in aqua, in terra, a summa parte ad infimam descendam. Primum nomina omnium: alites ab alis, volucres a volatu. Deinde generatim: de his pleraeque ab suis vocibus ut haec: upupa, cuculus, corvus, hirundo, ulula, bubo; item haec: pavo, anser, gallina, columba.

Sunt quae aliis de causis appellatae, ut noctua, quod noctu canit et vigilat, lusciniola, quod luctuose canere existimatur atque esse ex Attica Progne in luctu facta avis. Sic galeritus et motacilla, altera quod in capite habet plumam elatam, altera quod semper movet caudam. Merula, quod mera, id est sola, volitat; contra ab eo graguli, quod gregatim, ut quidam Graeci greges gergera. Ficedulae et miliariae a cibo, quod alterae fico, alterae milio fiunt pingues.

XII.

Aquatilium vocabula animalium partim sunt vernacula, partim peregrina. Foris muraena, quod myraina Graece, cybium et thynnus, cuius item partes Graecis vocabulis omnes, ut melander atque uraeon. Vocabula piscium pleraque translata a terrestribus ex aliqua parte similibus rebus, ut anguilla, lingulaca, sudis; alia a coloribus, ut haec: asellus, umbra, turdus; alia a vi quadam, ut haec: lupus, canicula, torpedo. Item in conchyliis aliqua ex Graecis, ut peloris, ostrea, echinus. Vernacula ad similitudinem, ut surenae, pectunculi, ungues.

XIII.

Sunt etiam animalia in aqua, quae in terram interdum exeant: alia Graecis vocabulis, ut polypus, hippos potamios, crocodilos, alia Latinis, ut rana, anas, mergus; a quo Graeci ea quae in aqua et terra possunt vivere vocant amphibia. E quis rana ab sua dicta voce, anas a nando, mergus quod mergendo in aquam captat escam.

Item alia in hoc genere a Graecis, ut querquedula, quod kerkedes, alcedo, quod ea halkyon; Latina, ut testudo, quod testa tectum hoc animal, lolligo, quod subvolat, littera commutata, primo volligo. Ut Aegypti in flumine quadrupes sic in Latio, nominati lutra et fiber. Lutra, quod succidere dicitur arborum radices in ripa atque eas dissolvere: ab luere lutra. Fiber, ab extrema ora fluminis dextra et sinistra maxime quod solet videri, et antiqui februm dicebant extremum, a quo in sagis fimbriae et in iecore extremum fibra, fiber dictus.

XIV.

De animalibus in locis terrestribus quae sunt hominum propria primum, deinde de pecore, tertio de feris scribam. Incipiam ab honore publico. Consu nominatus qui consuleret populum et senatum, nisi illinc potius unde Accius ait in Bruto:

Qui recte consulat, consul cluat.

Praetor dictus qui praeiret iure et exercitu; a quo id Lucilius:

Ergo praetorum est ante et praeire.

Censor ad cuius censionem, id est arbitrium, censeretur populus. Aedilis qui aedis sacras et privatas procuraret. Quaestores a quaerendo, qui

conquirent publicas pecunias et maleficia, quae triumviri capitales nunc conquirunt; ab his postea qui quaestionum iudicia exercent quaesitores dicti. Tribuni militum, quod terni tribus tribubus Ramnium, Lucerum, Titium olim ad exercitum mittebantur. Tribuni plebei, quod ex tribunis militum primum tribuni plebei facti, qui plebem defenderent, in secessione Crustumerina.

Dictator, quod a consule dicebatur, cui dicto audientes omnes essent. Magister equitum, quod summa potestas huius in equites et accensos, ut est summa populi dictator, a quo is quoque magister populi appellatus. Reliqui, quod minores quam hi magistri, dicti magistratus, ut ab albo albus.

XV.

Sacerdotes universi a sacris dicti. Pontufices, ut Scaevola Quintus pontufex maximus dicebat, a posse et facere, ut potentifices. Ego a ponte arbitror: nam ab his Sublicius est factus primum ut restitutus saepe, cum ideo sacra et uls et cis Tiberim non mediocri ritu fiant. Curiones dicti a curiis, qui fiunt ut in his sacra faciant.

Flamines, quod in Latio capite velato erant semper ac caput cinctum habebant filo, filamines dicti. Horum singuli cognomina habent ab eo deo cui sacra faciunt; sed partim sunt aperta, partim obscura: aperta ut Martialis, Volcanalis; obscura Dialis et Furinalis, cum Dialis ab Iove sit (Diovis enim), Furinalis a Furrina, cuius etiam in fastis feriae Furinales sunt. Sic flamen Falacer a divo patre Falacre.

Salii ab salitando, quod facere in comitiis in sacris quotannis et solent et debent. Luperci, quod Lupercalibus in Lupercali sacra faciunt. Fratres Arvales dicti qui sacra publica faciunt propterea ut fruges ferant arva: a ferendo et arvis Fratres Arvales dicti. Sunt qui a fratria dixerunt: fratria est Graecum vocabulum partis hominum, ut Neapoli etiam nunc. Sodales Titii ab avibus titiantibus dicti, quas in auguriis certis observare solent.

Fetiales, quod fidei publicae inter populos praeerant: nam per hos fiebat ut iustum conciperetur bellum, et inde desitum, ut foedere fides pacis constitueretur. Ex his mittebantur, ante quam conciperetur, qui res repeterent, et per hos etiam nunc fit foedus, quod fidus Ennius scribit dictum.

XVI.

In re militari praetor dictus qui praeiret exercitui. Imperator, ab imperio populi qui eos, qui id attemptassent, oppressit hostis. Legati qui lecti publice, quorum opera consilioque uteretur peregre magistratus, quive nuntii senatus aut populi essent. Exercitus, quod exercitando fit melior. Legio, quod leguntur milites in delectu.

Cohors, quod ut in villa ex pluribus tectis coniungitur ac quiddam fit unum, sic hic ex manipulis pluribus copulatur: cohors quae in villa, quod circa eum locum pecus coereretur, tametsi cohortem in villa Hypsicrates dicit esse

Graece Xorton apud poetas dictam. Manipulus exercitus minima manus quae unum sequitur signum. Centuria qui sub uno centurione sunt, quorum centenarius iustus numerus.

Milites, quod trium milium primo legio fiebat ac singulae tribus Titiensium, Ramnium, Lucerum milia militum mittebant. Hastati dicti qui primi hastis pugnabant, pilani qui pilis, principes qui a principio gladiis; ea post commutata re militari minus illustria sunt. Pilani triarii quoque dicti, quod in acie tertio ordine extremi subsidio deponebantur; quod hi subsidebant ab eo subsidium dictum, a quo Plautus:

Agite nunc, subsidite omnes quasi solent triarii.

Auxilium appellatum ab auctu, cum accesserant ei qui adiumento essent alienigenae. Praesidium dictum qui extra castra praesidebant in loco aliquo, quo tutior regio esset. Obsidium dictum ab obsidendo, quo minus hostis egredi posset. Insidiae item ab insidendo, cum id ideo facerent quo facilius deminuerent hostis. Duplicarii dicti quibus ob virtutem duplicia cibaria ut darentur institutum.

Turma terima (E in V abiit), quod ter deni equites ex tribus tribubus Titiensium, Ramnium, Lucerum fiebant. Itaque primi singularum decuriarum decuriones dicti, qui ab eo in singulis turmis sunt etiam nunc terni. Quos hi primo administros ipsi sibi adoptabant, optiones vocari coepti, quos nunc propter ambitionem tribuni faciunt. Tubicines a tuba et canendo, similiter liticines. Classicus a classe, qui item cornu aut lituo canit, ut tum cum classes comitiis ad comitiatum vocant.

XVII.

Quae a fortuna vocabula, in his quaedam minus aperta ut pauper, dives, miser, beatus, sic alia. Pauper a paulo lare. Mendicus a minus, cui cum opus est minus nullo est. Dives a divo qui ut deus nihil indigere videtur. Opulentus ab ope, cui eae opimae; ab eadem inops qui eius indiget, et ab eodem fonte copis ac copiosus. Pecuniosus a pecunia magna, pecunia a pecu: a pastoribus enim horum vocabulorum origo.

XVIII.

Artificibus maxima causa ars, id est, ab arte medicina ut sit medicus dictus, a sutrina sutor, non a medendo ac suendo, quae omnino ultima huic rei: hae enim earum rerum radices, ut in proximo libro aperietur. Quare quod ab arte artifex dicitur nec multa in eo obscura, relinquam.

Similis causa quae ab scientia vocantur, aliqua ut praestigiator, monitor, nomenclator; sic etiam quae a studio quodam dicuntur, cursor, natator, pugil. Etiam in hoc genere quae sunt vocabula pleraque aperta, ut legulus, alter ab oleis, alter ab uvis. Haec si minus aperta vindemiator, vestigator et venator,

tamen idem, quod vindemiator vel quod vinum legit dicitur vel quod de viti id demunt; vestigator a vestigiis ferarum quas indagatur; venator a vento, quod sequitur cervum ad ventum et in ventum.

XIX.

Haec de hominibus: hic quod sequitur de pecore, haec. Pecus ab eo quod perpascebant, a quo pecora universa. Quod in pecore pecunia tum pastoribus consistebat et standi fundamentum pes (a quo dicitur in aedificiis area pes magnus et qui negotium instituit pedem posuisse), a pede pecudem appellarunt, ut ab eodem pedicam et pedisequum et peculiariae oves aliudve quid: id enim peculium primum. Hinc peculatum publicum primo dixerunt cum pecore diceretur multa et id esset coactum in publicum, si erat aversum.

Ex quo fructus maior, hic est qui Graecis usus: sus, quod hys, bos, quod bous, taurus, quod tauros, item ovis, quod ois: ita enim antiqui dicebant, non ut nunc probaton. Possunt in Latio quoque ut in Graecia ab suis vocibus haec eadem ficta. Armenta, quod boves ideo maxime parabant, ut inde eligerent ad arandum; inde arimenta dicta, postea I tertia littera extrita. Vitulus, quod Graece antiquitus italos, aut quod plerique vegeti, vegetulus. Iuvencus, iuvare qui iam ad agrum colendum posset.

Capra carpa, a quo scriptum

Omnicarpa caprae.

Hircus, quod Sabini fircus; quod illic fedus, in Latio rure hedus, qui in urbe ut in multis A addito haedus. Porcus, quod Sabini dicunt aprunum porcum; proinde porcus, nisi si a Graecis, quod Athenis in libris sacrorum scripta est porke et porkos.

Aries, ut quidam dicebant, ab aris; veteres nostri ariuga, hinc ariugus. Haec sunt quarum in sacrificiis exta in olla, non in veru coquuntur, quas et Accius scribit et in pontificiis libris videmus. In hostiis eam dicunt ariugam, quae cornua habeat; quoniam si cui ovi mari testiculi dempti et ideo vi natura versa, verbex declinatum.

Pecori ovillo quod agnatus, agnus. Catulus a sagaci sensu et acuto, ut Cato Catulus; hinc canis: nisi quod ut tuba ac cornu, aliquod signum cum dent, canere dicuntur, quod hic item et noctulucus in custodia et in venando signum voce dat, canis dictus.

XX.

Ferarum vocabula item partim peregrina, ut panthera, leo: utraque Graeca, a quo etiam et rete quoddam panther et leaena et muliercula Pantheris et Leaena. Tigris qui est ut leo varius, qui vivus capi adhuc non potuit, vocabulum e lingua Armenia: nam ibi et sagitta et quod vehementissimum flumen dicitur Tigris. Ursi Lucana origo vel, unde illi, nostri ab ipsius voce.

Camelus suo nomine Syriaco in Latium venit, ut Alexandria camelopardalis nuper adducta, quod erat figura ut camelus, maculis ut panthera.

Apri ab eo quod in locis asperis, nisi a Graecis quod hi kaproi. Caprea a similitudine quadam caprae. Cervi, quod magna cornua gerunt, gervi, G in C mutavit ut in multis. Lepus, quod Siculi, ut Aeolis quidam Graeci, dicunt leporin: a Roma quod orti Siculi, ut annales veteres nostri dicunt, fortasse hinc illuc tulerunt et hic reliquerunt id nomen. Volpes, ut Aelius dicebat, quod volat pedibus.

XXI.

Proxima animalia sunt ea quae vivere dicuntur neque habere animam, ut virgulta. Virgultum dicitur a viridi, id a vi quadam humoris; quae si exaruit, moritur. Vitis, quod ea vini origo. Malum, quod Graeci Aeolis dicunt malon. Pinus, * * * Iuglans, quod cum haec nux antequam purgatur similis glandis, haec glans optima et maxima a Iove et glande iuglans est appellata. Eadem nux, quod ut nox aerem huius sucus corpus facit atrum.

Quae in hortis nascuntur, alia peregrinis vocabulis, ut Graecis ocimum, menta, ruta quam nunc peganon appellant; item caulis, lapathium, radix: sic enim antiqui Graeci, quam nunc raphanon; item haec Graecis vocabulis: serpyllum, rosa, una littera commutata; item ex his Graecis Latina koliandron, malache, kyminon; item lilium ab leirio et malva ab malachei et sisymbrium a sisymbrioi.

Vernacula: lactuca a lacte, quod holus id habet lact; brassica ut praesica, quod ex eius scapo minutatim praesicatur; asparagi, quod ex asperis virgultis leguntur et ipsi scapi asperi sunt, non leves; nisi Graecum: illic quoque enim dicitur asparagos. Cucumeres dicuntur a curvore, ut curvimeres dicti. Fructus a ferundo, res eae quas, fundus et eae quas quae in fundo ferunt ut fruamur. Hinc declinatae fruges et frumentum, sed ea e terra; etiam frumentum, quod ad exta ollicoqua solet addi ex mola, id est ex sale et farre molito. Uvae ab uvore.

XXII.

Quae manu facta sunt dicam, de victu, de vestitu, de instrumento, et si quid aliud videbitur his aptum. De victu antiquissima puls; haec appellata vel quod ita Graeci vel ab eo unde scribit Apollodorus, quod ita sonet cum aquae ferventi insipitur. Panis, quod primo figura faciebant, ut mulieres in lanificio, panus; posteaquam ei figuras facere instituerunt alias, a pane et faciendo panificium coeptum dici. Hinc panarium, ubi id servabant, sicut granarium, ubi granum frumenti condebant, unde id dictum: nisi ab eo quod Graeci id kranon, a quo a Graecis quoque granarium dictum in quo ea quae conduntur.

Hordeum, ab horrido. Triticum, quod tritum e spicis. Far a faciendo, quod in pistrino fit. Milium a Graeco: nam id meline. Libum, quod ut libaretur, priusquam essetur, erat coctum. Testuacium, quod in testu caldo coquebatur,

ut etiam nunc Matralibus id faciunt matronae. Circuli, quod mixta farina et caseo et aqua circuitum aequabiliter fundebant.

Hos quidam qui magis incondite faciebant vocabant lixulas et similixulas vocabulo Sabino: quae frequentia Sabinis. A globo farinae dilatato, item in oleo cocti, dicti a globo globi. Crustulum a crusta pultis, cuius ea, quod ut corium et uritur, crusta dicta. Cetera fere aperta a vocabulis Graecis sumpta, ut thrion et placenta.

Quod edebant cum pulte, ab eo pulmentum, ut Plautus; hinc pulmentarium dictum: hoc primum defuit pastoribus. Caseus a coacto lacte ut coaxeus dictus. Dein posteaquam desierunt esse contenti his quae suapte natura ferebat sine igne, in quo erant poma, quae minus cruda esse poterant decoquebant in olla. Ab olla holera dicta, quod earum macerare cruda holera. E quis ad coquendum quod e terra eruitur, ruapa, unde rapa. Olea ab elaiā; olea grandis orchitis quod eam Attici orchin morian.

Hinc ad pecudis carnem perventum est. Ut ab sue suilla, sic ab aliis generibus cognominata. Hanc primo assam, secundo elixam, tertio e iure uti coepisse natura docet. Dictum assum, quod id ab igni assudescit, id est uvescit: uvidum enim quod humidum, et ideo ubi id non est, sucus abest; et ideo sudandum assum destillat calore, et ut crudum nimium habet humoris, sic excoctum parum habet suci. Elixum e liquore aquae dictum; et ex iure, quod iucundum magis conditione.

Succidia ab suis caedendis: nam id pecus primum occidere coeperunt, domini et ut servarent sallere. Tegus suis ab eo quod eo tegitur. Perna a pede. Sueris a nomine eius. Offula ab offa, minima suere. Insicia ab eo quod insecta caro, ut in Carmine Saliorum prosicium est, quod in extis dicitur nunc prosectum. Murtatum a murta, quod ea additur large fartis.

Quod fartum intestinum e crassundiis, Lucanicam dicunt, quod milites a Lucanis didicerint, ut quod Faleriis Faliscum ventrem; fundolum a fundo, quod non ut reliquae lactes, sed ex una parte sola apertum; ab hoc Graecos puto tuphlon enteron appellasse. Ab eadem fartura farcimīna in extis appellata, a quo farticulum: in eo quod tenuissimum intestinum fartum, hila ab hilo dicta illo quod ait Ennius:

Neque dispendi facit hilum.

Quod in hoc farcimine summo quiddam eminet, ab eo quod ut in capite apex, apexabo dicta. Tertium fartum est longavo, quod longius quam duo illa.

Augmentum, quod ex immolata hostia desectum in iecore imponitur in porriciendo augendi causa. Magmentum a magis, quod ad religionem magis pertinet: itaque propter hoc magmentaria fana constituta locis certis quo id imponeretur. Mattea ab eo quod ea Graece mattye. Item a Graecis * * * singillatim haec: * * * ovum, bulbum.

Lana Graecum, ut Polybius et Callimachus scribunt. Purpura a purpurae maritimae colore, ut Poenicum, quod a Poenis primum dicitur allata. Stamen a stando, quod eo stat omne in tela velamentum. Subtemen, quod subit stamini. Trama, quod trameat frigus id genus vestimenti. Densum a dentibus pectinis quibus feritur. Filum, quod minimum est hilum: id enim minimum est in vestimento.

Pannus Graecum, ubi E A fecit. Panuvellium dictum a pano et volvendo filo. Tunica ab tuendo corpore, tunica ut tuendica. Toga a tegendo. Cinctus et cingillum a cingendo, alterum viris, alterum mulieribus attributum.

XXIV.

Arma ab arcendo, quod his arcemus hostem. Parma, quod e medio in omnis partis par. Conum, quod cogitur in cacumen versus. Hasta, quod astans solet ferri. Iaculum, quod ut iaciatur fit. Tragula a traiciendo. Scutum a sectura ut secutum, quod a minute consectis fit tabellis. Umbones a Graeco, quod ambones.

Gladium C in G commutato a clade, quod fit ad hostium cladem gladium; similiter ab omine pilum, qui hostis periret, ut perilum. Lorica, quod e loris de corio crudo pectoralia faciebant; postea subcidit gallica e ferro sub id vocabulum, ex anulis ferrea tunica. Balteum, quod cingulum e corio habebant bullatum, balteum dictum. Ocrea, quod opponebatur ob crus. Galea ab galero, quod multi usi antiqui.

Tubae ab tubis, quos etiam nunc ita appellant tubicines sacrorum. Cornua, quod ea quae nunc sunt ex aere, tunc fiebant bubulo e cornu. Vallum vel quod ea varicare nemo posset vel quod singula ibi extrema bacilla furcillata habent figuram litterae V. Cervi ab similitudine cornuum cervi; item reliqua fere ab similitudine ut vineae, testudo, aries.

XXV.

Mensam escariam cillibam appellabant; ea erat quadrata ut etiam nunc in castris est; a cibo cilliba dicta; postea rutunda facta, et quod a nobis media et a Graecis mesa, mensa dicta potest; nisi etiam quod ponebant pleraque in cibo mensa. Trulla a similitudine truae, quae quod magna et haec pusilla, ut truella; hanc, Graeci tryelen. Trua qua e culina in lavatrinam aquam fundunt; trua, quod travolat ea aqua. Ab eodem est appellatum truleum: simile enim figura, nisi quod latius est, quod concipiat aquam, et quod manubrium cavum non est nisi in vinario truleo.

Accessit matellio a matula dictus et fictus, qui, posteaquam longius a figura matulae discessit, et ab aqua aqualis dictus. Vas aquarium vocant futim, quod in triclinio allatam aquam infundebant; quo postea accessit nanus cum Graeco nomine et cum Latino nomine Graeca figura barbatus. Pelvis pedeluis a pedum lavatione. Candelabrum a candela: ex his enim funiculi ardentes fiebantur. Lucerna post inventa, quae dicta a luce aut quod id vocant lychnon

Graeci.

Vasa in mensa escaria: ubi pulsem aut iurulentum quid ponebant, a capiendum catinum nominarunt, nisi quod Siculi dicunt katinon ubi assa ponebant; magidam aut langulam alterum a magnitudine alterum a latitudine finxerunt. Patenas a patulo dixerunt, ut pusillas, quod his libarent cenam, patellas. Tryblia et canistra quod putant esse Latina, sunt Graeca: tryblion enim et kanoun dicuntur Graece. Reliqua quod aperta sunt unde sint relinquo.

XXVI.

Mensa vinaria rotunda nominabatur cilliba ante, ut etiam nunc in castris. Id videtur declinatum a Graeco kylikeioi, id a poculo cylice qui in illa. Capides et minores capulae a capiendum, quod ansatae ut prehendi possent, id est capi. Harum figuras in vasis sacris ligneas ac fictiles antiquas etiam nunc videmus.

Praeterea in poculis erant paterae, ab eo quod late patent ita dictae. Hisce etiam nunc in publico convivio antiquitatis retinendae causa, cum magistri fiunt, potio circumfertur, et in sacrificando deis hoc poculo magistratus dat deo vinum. Pocula a potione, unde potatio et etiam posca. Haec possunt a potoi, quod potos potio Graece.

Origo potionis aqua, quod aequa summa. Fons unde funditur e terra aqua viva, ut fistula a qua fusus aquae. Vas vinarium grandius sinum ab sinu, quod sinum maiorem cavationem quam pocula habebant. Item dictae lepestae, quae etiam nunc in diebus sacris Sabinis vasa vinaria in mensa deorum sunt posita; apud antiquos scriptores Graecos inveni appellari poculi genus depestan: quare vel inde radices in agrum Sabinum et Romanum sunt profectae.

Qui vinum dabant ut minutatim funderent, a guttis guttum appellarunt; qui sumebant minutatim, a sumendo simpulum nominarunt. In huiusce locum in conviviis e Graecia successit epichysis et cyathus; in sacrificiis remansit guttus et simpulum.

Altera vasaria mensa erat lapidea quadrata oblonga una columella; vocabatur cartibulum. Haec in aedibus ad compluvium apud multos me puero ponebatur et in ea et circum eam aenea vasa: a gerendo cartibulum potest dictum.

XXVII.

Praeterea erat tertium genus mensae item quadratae vasorum; vocabatur urnarium, quod urnas cum aqua positas ibi potissimum habebant in culina. Ab eo etiam nunc ante balineum locus ubi poni solebat urnarium vocatur. Urnae dictae, quod urinant in aqua haurienda ut urinator. Urinare est mergi in aquam.

Amburvom fictum ab urvo, quod ita flexum ut redeat sursum versus ut in aratro quod est urvum. Calix a caldo, quod in eo calda puls apponebatur et caldum eo bibebant. Vas ubi coquebant cibum, ab eo caccabum appellarunt. Veru a versando.

Ab sedendo appellatae sedes, sedile, solium, sellae, siliquastrum; deinde ab his subsellium: ut subsipere quod non plane sapit, sic quod non plane erat sella, subsellium. Ubi in eiusmodi duo, bisellium dictum. Arca, quod arcebantur fures ab ea clausa. Armarium et armamentarium ab eadem origine, sed declinata aliter.

XXIX.

Mundus ornatus muliebris dictus a munditia. Ornatus quasi ab ore natus: hinc enim maxime sumitur quod eam deceat, itaque id paratur speculo. Calamistrum, quod his calfactis in cinere capillus ornatur. Qui ea ministrabat, a cinere cinerarius est appellatus. Discerniculum, quo discernitur capillus. Pecten, quod per eum explicatur capillus. Speculum a speciendo, quod ibi se spectant.

Vestis a vellis vel ab eo quod vellus lana tona universa ovis: id dictum, quod vellebant. Lanea, ex lana facta. Quod capillum contineret, dictum a rete reticulum; rete ab raritudine; item texta fasciola, qua capillum in capite alligarent, dictum capital a capite, quod sacerdotulae in capite etiam nunc solent habere. Sic rica ab ritu, quod Romano ritu sacrificium feminae cum faciunt, capita velant. Mitra et reliqua fere in capite postea addita cum vocabulis Graecis.

XXX.

Prius deinde indutui, tum amictui quae sunt tangam. Capitium ab eo quod capit pectus, id est, ut antiqui dicebant, comprehendit. Indutui alterum quod subtus, a quo subucula; alterum quod supra, a quo supparus, nisi id quod item dicunt Osce. Alterius generis item duo, unum quod foris ac palam, palla; alterum quod intus, a quo indusium, ut intusium, id quod Plautus dicit:

Indusiatam patagiatam caltulam ac crocotulam.

Multa post luxuria attulit, quorum vocabula apparet esse Graeca, ut asbestinon.

Amictui dictum quod ambiectum, est, id est circumiectum, a quo etiam quo vestitas se involuunt, circumiectui appellant, et quod amictui habet purpuram circum, vocant circumtextum. Antiquissimi amictui ricinium; id quod eo utebantur duplici, ab eo quod dimidiam partem retrorsum iaciebant, ab reiciendo ricinium dictum.

Pallia hinc, quod facta duo simplicia paria, parilia primo dicta, R exclusum propter levitatem. Parapechia, chlamydes, sic multa, Graeca. Laena, quod de lana multa, duarum etiam togarum instar; ut antiquissimum mulierum ricinium, sic hoc duplex virorum.

Instrumenta rustica quae serendi aut colendi fructus causa facta. Sarculum ab serendo ac sariendo. Ligo, quod eo propter latitudinem quod sub terra facilius legitur. Pala a pangendo, L GL quod fuit. Rutrum ruitrum a ruendo.

Aratrum, quod arruit terram. Eius ferrum vomer, quod vomit eo plus terram. Dens, quod eo mordetur terra; super id regula quae stat, stiva ab stando, et in ea transversa regula manica, quod manu bubulci tenetur. Qui quasi temo est inter boves, bura a bubus; alii hoc a curvo urvum, appellant. Sub iugo medio cavum, quod bura extrema addita oppilatur, vocatur coum a cavo. Iugum et iumentum ab iunctu.

Irpices regula compluribus dentibus, quam item ut plaustrum boves trahunt, ut eruant quae in terra serpunt; sirpices, postea irpices S detricto, a quibusdam dicti. Rastelli ut irpices serrae leves; itaque homo in pratis per fenisecia eo festucas corradit, quo ab rasu rastelli dicti. Rastri, quibus dentatis penitus eradunt terram atque eruunt, a quo rutu ruastrum dicti.

Falces a farre littera commutata; hae in Campania seculae a secando; a quadam similitudine harum aliae, ut quod apertum unde, falces fenariae et arborariae et, quod non apertum unde, falces lumariae et sirpiculae. Lumariae sunt quibus secant lumecta, id est cum in agris serpunt spinae; quas quod ab terra agricolae solvunt, id est luunt, lumecta. Falces sirpiculae vocatae ab sirpando, id est ab alligando; sic sirpata dolia quassa, cum alligata his, dicta. Utuntur in vinea alligando fasces, incisos fustes, faculas. Has zancas, Chersonesice.

Pilum, quod eo far pisunt, a quo ubi id fit dictum pistrinum (L et S inter se saepe locum commutant), inde post in Urbe Lucili pistrina et pistrix. Trapetes molae oleariae; vocant trapetes a terendo, nisi Graecum est; ac molae a molliendo: harum enim motu eo coniecta molliuntur. Vallum a volatu, quod cum id iactant volant inde levia. Ventilabrum, quod ventilatur in aere frumentum.

Quibus conportatur fructus ac necessariae res: de his fiscina a ferendo dicta. Corbes ab eo quod eo spicas aliudve quid corruebant; hinc minores corbulae dictae. De his quae iumenta ducunt, tragula, quod ab eo trahitur per terram; sirpea, quae virgis sirpatur, id est colligando implicatur, in qua stercus aliudve quid vehitur.

Vehiculum, in quo faba aliudve quid vehitur, quod e viminibus vietur aut eo vehitur. Brevius vehiculum dictum est aliis ut arcera, quae etiam in Duodecim Tabulis appellatur; quod ex tabulis vehiculum erat factum ut arca, arcera dictum. Plaustrum ab eo quod non ut in his quae supra dixi ex quadam parte, sed ex omni parte palam est, quae in eo vehuntur quod perlucent, ut lapides, asseres, tignum.

Aedificia nominata a parte ut multa: ab aedibus et faciendo maxime

aedificium. Et oppidum ab opi dictum, quod munitur opis causa ubi sint et quod opus est ad vitam gerendam ubi habeant tuto. Oppida quod opere muniebant, moenia; quo moenitius esset quod exaggerabant, aggeres dicti, et qui aggerem contineret, moerus. Quod muniendi causa portabatur, munus; quod sepiebant oppidum eo moenere, moerus.

Eius summa pinnae ab his quas insigniti milites in galeis habere solent et in gladiatoribus Samnites. Turres a torvis, quod eae prociunt ante alios. Qua viam relinquebant in muro, qua in oppidum portarent, portas.

Oppida condebant in Latio Etrusco ritu multi, id est iunctis bobus, tauro et vacca interiore, aratro circumagebant sulcum (hoc faciebant religionis causa die auspicato), ut fossa et muro essent muniti. Terram unde exculpserant, fossam vocabant et introrsum iactam murum. Post ea qui fiebat orbis, urbis principium; qui quod erat post murum, postmoerium dictum, eo usque auspicia urbana finiuntur. Cippi pomeri stant et circum Ariciam et circum Romam. Quare et oppida quae prius erant circumducta aratro ab orbe et urvo urbes; et, ideo coloniae nostrae omnes in litteris antiquis scribuntur urbes, quod item conditae ut Roma; et ideo coloniae et urbes conduntur, quod intra pomerium ponuntur.

Oppidum quod primum conditum in Latio stirpis Romanae, Lavinium: nam ibi dii Penates nostri. Hoc a Latini filia, quae coniuncta Aeneae, Lavinia, appellatum. Hinc post triginta annos oppidum alterum conditur, Alba; id ab sue alba nominatum. Haec e navi Aeneae cum fugisset Lavinium, triginta parit porcos; ex hoc prodigio post Lavinium conditum annis triginta haec urbs facta, propter colorem suis et loci naturam Alba Longa dicta. Hinc mater Romuli Rhea, ex hac Romulus, hinc Roma.

In oppido vici a via, quod ex utraque parte viae sunt aedificia. Fundulae a fundo, quod exitum non habent ac pervium non est. Angiportum, sive quod id, angustum, sive ab agendo et portu. Quo conferrent suas controversias et quae venderentur vellent quo ferrent, forum appellarunt.

Ubi quid generatim, additum ab eo cognomen, ut Forum Bovarium, Forum Holitorium: hoc erat antiquum Macellum, ubi holerum copia; ea loca etiam nunc Lacedaemonii vocant makellon, sed Iones ostia hortorum makellotas hortorum, et castelli makella. Secundum Tiberim ad Portunium Forum Piscarium vocant: ideo ait Plautus:

Apud Forum Piscarium.

Ubi variae res ad Corneta Forum Cuppedinis a cuppedio, id est a fastidio, quod multi Forum Cupidinis a cupiditate.

Haec omnia posteaquam contracta in unum locum quae ad victum pertinebant et aedificatus locus, appellatum Macellum, ut quidam scribunt, quod ibi fuerit hortus, alii quod ibi domus furis, cui cognomen fuit Macellus, quae ibi publice sit diruta, e qua aedificatum hoc quod vocetur ab eo Macellum.

In Foro Lacum Curtium a Curtio dictum constat, et de eo triceps historia:

nam et Procilius non idem prodidit quod Piso, nec quod is Cornelius secutus. A Procilio relatum in eo loco dehisce terram et id ex S.C. ad haruspices relatum esse; responsum deum Manium postilionem postulare, id est civem fortissimum eo demitti. Tum quendam Curtium virum fortem armatum ascendisse in equum et a Concordia versum cum eo praecipitatum; eo facto locum coisse atque eius corpus divinitus humasse ac reliquisse genti suae monumentum.

Piso in Annalibus scribit Sabino bello, quod fuit Romulo et Tatius, virum fortissimum Mettium Curtium Sabinum, cum Romulus cum suis ex superiore parte impressionem fecisset, in locum palustrem, qui tum fuit in Foro antequam cloacae sunt factae, secessisse atque ad suos in Capitolium recepisce; ab eo lacum Curtium invenisse nomen.

Cornelius et Lutatius scribunt eum locum esse fulguritum et ex S. C. septum esse: id quod factum esset a Curtio consule, cui M. Genucius fuit collega, Curtium appellatum.

Arx ab arcendo, quod is locus munitissimus Urbis, a quo facillime possit hostis prohiberi. Carcer a coerendo, quod exire prohibentur. In hoc pars quae sub terra Tullianum, ideo quod additum a Tullio rege. Quod Syracusis, ubi delicti causa custodiuntur, vocantur latomiae, inde lautumia translatum, quod hic quoque in eo loco lapidicinae fuerunt.

In Aventino, Lauretum ab eo quod ibi sepultus est Tattius rex, qui ab Laurentibus interfectus est, aut ab silva laurea, quod ea ibi excisa et aedificatus vicus: ut inter Sacram Viam et Macellum editum Corneta a cornis, quae abscisae loco reliquerunt nomen, ut Aesculetum ab aesculo dictum et Fagutal a fago, unde etiam Iovis Fagutalis, quod ibi sacellum.

Armilustrium ab ambitu lustris: locus idem Circus Maximus, dictus, quod circum spectaculis aedificatus ubi ludi fiunt, et quod ibi circum metas fertur pompa et equi currunt. Itaque dictum in Cornicularia militis adventu, quem circumeunt ludentes:

Quid cessamus ludos facere? Circus noster ecce adest.

In circo primum unde mittuntur equi, nunc dicuntur carceres, Naevius oppidum appellat. Carceres dicti, quod coercentur equi, ne inde exeant antequam magistratus signum misit. Quod ad muri speciem pinnis turribusque carceres olim fuerunt, scripsit poeta:

Dictator ubi currum insidit, pervehitur usque ad oppidum.

Intumus circus ad Murciae, vocatur, ut Procilius aiebat, ab urceis, quod is locus esset inter figulos; alii dicunt a murteto declinatum, quod ibi id fuerit; cuius vestigium manet, quod ibi est sacellum etiam nunc Murteae Veneris. Item simili de causa Circus Flaminius dicitur, qui circum aedificatus est Flaminium Campum, et quod ibi quoque Ludis Tauris equi circum metas currunt.

Comitium ab eo quod coibant eo comitiis curiatis et litium causa. Curiae duorum generum: nam et ubi curarent sacerdotes res divinas, ut curiae veteres,

et ubi senatus humanas, ut Curia Hostilia, quod primus aedificavit Hostilius rex. Ante hanc Rostra; cuius id vocabulum, ex hostibus capta fixa sunt rostra; sub dextra huius a Comitio locus substructus, ubi nationum subsisterent legati qui ad senatum essent missi; is Graecostasis appellatus a parte, ut multa.

Senaculum supra Graecostasim, ubi Aedis Concordiae et Basilica Opimia; Senaculum vocatum, ubi senatus aut ubi seniores consisterent, dictum ut gerosia apud Graecos. Lautolae ab lavando, quod ibi ad Ianum Geminum aquae caldae fuerunt. Ab his palus fuit in Minore Velabro, a quo, quod ibi vehebantur lintribus, velabrum, ut illud de quo supra dictum est.

Aequimaelium, quod aequata Maeli domus publice, quod regnum occupare voluit is. Locus ad Busta Gallica, quod Roma recuperata Gallorum ossa qui possederunt urbem ibi coacervata ac consepta. Locus qui vocatur Doliola ad Cluacam Maxumam, ubi non licet despuere, a doliolis sub terra. Eorum duae traditae historiae, quod alii inesse aiunt ossa cadaverum, alii Numae Pompilii religiosa quaedam post mortem eius infossa. Argiletum sunt qui scripserunt ab Argo Larisaeo, quod is huc venerit ibique sit sepultus, alii ab argilla, quod ibi id genus terrae sit.

Clivos Publicius ab aedilibus plebei Publiciis qui eum publice aedificarunt. Simili de causa Pullius et Cosconius, quod ab his viocuris dicuntur aedificati. Clivus proximus a Flora susus versus Capitolium Vetus, quod ibi sacellum Iovis Iunonis Minervae, et id antiquius quam aedis quae in Capitolio facta.

Esquiliis Vicus Africus, quod ibi obsides ex Africa bello Punico dicuntur custoditi. Vicus Cyprius a cypro, quod ibi Sabini cives additi consederunt, qui a bono omine id appellarunt: nam cyprum Sabine bonum. Prope hunc Vicus Sceleratus, dictus a Tullia Tarquini Superbi uxore, quod ibi cum iaceret pater occisus, supra eum carpentum mulio ut inigeret iussit.

XXXIII.

Quoniam vicus constat ex domibus, nunc earum vocabula videamus. Domus Graecum et ideo in aedibus sacris ante cellam, ubi sedes dei sunt, Graeci dicunt prodomon, quod post est, opisthomon. Aedes ab aditu, quod plano pede adibant. Itaque ex aedibus efferri indictivo funere praeco etiam eos dicit qui ex tabernis efferuntur, et omnes in censu villas inde dedicamus aedes.

Cavum aedium dictum qui locus tectus intra parietes relinquebatur patulus, qui esset ad communem omnium usum. In hoc locus si nullus relictus erat, sub divo qui esset, dicebatur testudo ab testudinis similitudine, ut est in praetorio et castris. Si relictum erat in medio ut lucem caperet, deorsum quo impluebat, dictum impluium, susum qua compluebat, compluium: utrumque a pluvia. Tuscanicum dictum a Tuscis, posteaquam illorum cavum aedium simulare coeperunt. Atrium appellatum ab Atriatibus Tuscis: illinc enim exemplum sumptum.

Circum cavum aedium erat unius cuiusque rei utilitatis causa parietibus dissepata: ubi quid conditum esse volebant, a celando cellam appellarunt; penariam ubi penus; ubi cubabant cubiculum; ubi cenabant cenaculum

vocitabant, ut etiam nunc Lanuvi apud aedem Iunonis et in cetero Latio ac Faleriis et Cordubae dicuntur. Posteaquam in superiore parte cenitare coeperunt, superioris domus universa cenacula dicta; posteaquam ubi cenabant plura facere coeperunt, ut in castris ab hieme hiberna, hibernum domus vocarunt; contraria * * *

XXXIV.

* * * quam religionem Porcius designat cum de Ennio scribens dicit eum coluisse Tutilinae loca. Sequitur Porta Naevia, quod in nemoribus Naeviiis: etenim loca, ubi ea, sic dicta. Deinde Rauduscula, quod aerata fuit. Aes raudus dictum; ex eo veteribus in mancipiis scriptum:

Raudusculo libram ferito.

Hinc Lavernalis ab ara Lavernae, quod ibi ara eius.

Praeterea intra muros video portas dici in Palatio Mucionis a mugitu, quod ea pecus in buceta tum ante antiquum oppidum exigebant; alteram Romanulam, ab Roma dictam, quae habet gradus in Nova Via ad Volupiae sacellum.

Tertia est Ianualis, dicta ab Iano, et ideo ibi positum Iani signum et ius institutum a Pompilio, ut scribit in Annalibus Piso, ut sit aperta semper, nisi cum bellum sit nusquam. Traditum est memoriae Pompilio rege fuisse opertam et post Tito Manlio consule bello Carthaginiensi primo confecto, et eodem anno apertam.

XXXV.

Super lectulis origines quas adverti, hae: lectica, quod legebant unde eam facerent stramenta atque herbam, ut etiam nunc fit in castris; lecticas, ne essent in terra, sublimis in his ponebant; nisi ab eo quod Graeci antiqui dicebant lektron lectum potius. Qui lecticam involvebant, quod fere stramenta erant e segete, segestria appellarunt, ut etiam nunc in castris, nisi si a Graecis: nam stegastron ibi. Lectus mortui quod fertur, dicebant feretrum nostri, Graeci pheretron.

Posteaquam transierunt ad culcitas, quod in eas acus aut tomentum aliudve quid calcabant, ab inculcando culcita dicta. Hoc quicquid insternebant ab sternendo stragulum appellabant. Pulvinar vel a plumis vel a pellulis declinarunt. Quibus operiebantur, operimenta, et pallia opercula dixerunt. In his multa peregrina, ut sagum, reno Gallica, ut gaunaca et amphimallum Graeca; contra Latinum toral, ante torum, et torus a torto, quod is in promptu. Ab hac similitudine torulus, in mulieris capite ornatus.

Qua simplici scansione scandebant in lectum non altum, scabellum; in altiore, scamnum. Duplicata scansio gradus dicitur, quod gerit in inferiore superiore. Graeca sunt peristromata et peripetasmata, sic alia quae item convivii causa ibi multa.

Pecuniae signatae vocabula sunt aeris et argenti haec: as ab aere; dupondius ab duobus ponderibus, quod unum pondus assipondium dicebatur; id ideo quod as erat libra pondo. Deinde ab numero reliquum dictum usque ad centussis, ut as singulari numero, ab tribus assibus tressis, et sic proportionem usque ad nonussis.

In denario numero hoc mutat, quod primum est ab decem assibus decussis, secundum ab duobus decussibus vicessis, quod dici solitum a duobus bicesis; reliqua conveniunt, quod est ut tricessis proportionem usque ad centussis, quod maius aeris proprium vocabulum non est: nam ducentis et sic proportionem quae dicuntur non magis asses quam denarii aliaeque quae res significantur.

Aeris minima pars sextula, quod sexta pars unciae. Semuncia, quod dimidia pars unciae: se valet dimidium, ut in selibra et semodio. Uncia ab uno. Sextans ab eo quod sexta pars assis, ut quadrans quod quarta, et triens quod tertia pars. Semis, quod semias, id est dimidium assis, ut supra dictum est. Septunx a septem et uncia conclusum.

Reliqua obscuriora, quod ab diminutione, et ea quae diminuantur ita sunt, ut extremas syllabas habeant: ut unde una dempta uncia deunx, dextans dempto sextante, dodrans dempto quadrante, bes, ut olim des, dempto triente.

In argento nummi, id ab Siculis: denarii, quod denos aeris valebant; quinarii, quod quinos; sestertius, quod semis tertius. Dupondius enim et semis antiquus sestertius: est et veteris consuetudinis, ut retro aere dicerent, ita ut semis tertius, semis quartus, semis quintus pronuntiarent. Ab semis tertius sestertius dictus.

Nummi denarii decuma libella, quod libram pondo as valebat et erat ex argento parva. Simbella, quod libellae dimidium, quod semis assis. Terruncius a tribus unciis, quod libellae ut haec quarta pars, sic quadrans assis.

Eadem pecunia vocabulum mutat: nam potest item dici dos, arrabo, merces, corollarium. Dos, si nuptiarum causa data; haec Graece dotine: ita enim hoc Siculi. Ab eodem donum: nam Graece ut Aeolis doneion, et ut alii doma et ut Attici dosin. Arrabo sic data, ut reliquum reddatur: hoc verbum item a Graeco arrhabon. Reliquum, quod ex eo quod debitum reliquum.

Damnum a demptione, cum minus re factum quam quanti constat. Lucrum ab luendo, si amplius quam ut exsolveret, quanti esset, receptum. Detrimentum a detritu, quod ea quae trita minoris pretii. Ab eodem trimento, intertrimentum ab eo, quod duo quae inter se trita, et diminuta; a quo etiam intertrigo dicta.

Multa ea pecunia quae a magistratu dicta, ut exigi posset ob peccatum; quod singulae dicuntur, appellatae eae multae, et quod olim vinum dicebant multam: itaque cum in dolium aut culleum vinum addunt rustici, prima urna addita dicunt etiam nunc. Poena a poeniendo aut quod post peccatum sequitur. Pretium, quod emptionis aestimationisve causa constituitur, dictum a peritis,

quod hi soli facere possunt recte id.

Si quid datum pro opera aut opere, merces, a merendo. Quod manu factum erat et datum pro eo, manupretium, a manibus et pretio. Corollarium, si additum praeter quam quod debitum; eius vocabulum fictum a corollis, quod eae, cum placuerant actores, in scaena dari solitae. Praeda est ab hostibus capta, quod manu parta, ut parida praeda. Praemium a praeda, quod ob recte quid factum concessum.

Si datum quod reddatur, mutuum, quod Siculi moiton: itaque scribit Sophron
Moiton antimon.

Et munus quod mutuo animo qui sunt dant officii causa; alterum munus, quod muniendi causa imperatum, a quo etiam municipes, qui una munus fungi debent, dicti.

Si est ea pecunia quae in iudicium venit in litibus, sacramentum a sacro; qui petebat et qui infitiabatur, de aliis rebus uterque quingenos aeris ad pontificem deponebant, de aliis rebus item certo alio legitimo numero actum; qui iudicio vicerat, suum sacramentum e sacro auferebat, victi ad aerarium redibat.

Tributum dictum a tribubus, quod ea pecunia, quae populo imperata erat, tributum a singulis pro portione census exigebatur. Ab hoc ea quae assignata erat attributum dictum; ab eo quoque quibus attributa erat pecunia, ut militi reddant, tribuni aerarii dicti; id quod attributum erat, aes militare; hoc est quod ait Plautus:

Cedit miles, aes petit.

Et hinc dicuntur milites aerarii ab aere, quod stipendia facerent.

Hoc ipsum stipendium a stipe dictum, quod aes quoque stipem dicebant: nam quod asses librae, pondo erant, qui acceperant maiorem numerum non in arca ponebant, sed in aliqua cella stipabant, id est componebant, quo minus loci occuparet; ab stipando stipem dicere coeperunt. Stips ab stoibe fortasse, Graeco verbo. Id apparet, quod ut tum institutum etiam nunc diis cum thesauris asses dant stipem dicunt, et qui pecuniam alligat, stipulari et restipulari. Militis stipendia ideo, quod eam stipem pendebant; ab eo etiam Ennius scribit:

Poeni stipendia pendunt.

Ab eodem aere pendendo dispensator, et in tabulis scribimus expensum et inde prima pensio et sic secunda aut quae alia, et dispendium, ideo quod in dispendendo solet minus fieri; compendium quod cum compenditur una fit; a quo usura, quod in sorte accedebat, impendium appellatum; quae cum non accederet ad sortem usu, usura dicta, ut sors quod suum fit sorte. Per trutinam solvi solitum: vestigium etiam nunc manet in aede Saturni, quod ea etiam nunc propter pensuram trutinam habet positam. Ab aere Aerarium appellatum.

Ad vocabula quae pertinere sumus rati ea quae loca et ea quae in locis sunt satis ut arbitror dicta, quod neque parum multa sunt aperta neque, si amplius velimus, volumen patietur. Quare in proximo, ut in primo libro dixi, quod sequitur de temporibus dicam.

LIBER VI

I.

Origines verborum quae sunt locorum et ea quae in his in priore libro scripsi. In hoc dicam de vocabulis temporum et earum rerum quae in agendo fiunt aut dicuntur cum tempore aliquo ut sedetur, ambulatur, loquuntur; atque si quae erunt ex diverso genere adiuncta, potius cognationi verborum quam auditori calumnianti geremus morem.

Huius rei auctor satis mihi Chrysippus et Antipater et illi in quibus, si non tantum acuminis, at plus litterarum, in quo est Aristophanes et Apollodorus, qui omnes verba ex verbis ita declinari scribunt, ut verba litteras alia assumant, alia mittant, alia commutent, ut fit in turdo, in turdario et turdelice. Sic declinantes Graeci nostra nomina dicunt Lucienum Leukienon et Quinctium Kointion, et nostri illorum Aristarchon Aristarchum et Diona Dionem; sic, inquam, consuetudo nostra multa declinavit a vetere, ut ab solu solum, ab Loebeso Liberum, ab Lasibus Lares: quae obruta vetustate ut potero eruere conabor.

II.

Dicemus primo de temporibus, tum quae per ea fiunt, sed ita ut ante de natura eorum: ea enim dux fuit ad vocabula imponenda homini. Tempus esse dicunt intervallum mundi motus. Id divisum in partes aliquot maxime ab solis et lunae cursu. Itaque ab eorum tenore temperato tempus dictum, unde tempestiva; et a motu eorum qui toto caelo coniunctus mundus.

Duo motus solis: alter cum caelo, quod movetur ab Iove rectore, qui Graece Dia appellatur, cum ab oriente ad occasum venit, quo tempus id ab hoc deo dies appellatur. Meridies ab eo quod medius dies. D antiqui, non R in hoc dicebant, ut Praeneste incisum in solario vidi. Solarium dictum id, in quo horae in sole inspieiebantur, vel horologium ex aqua, quod Cornelius in Basilica Aemilia et Fulvia inumbravit. Diei principium mane, quod tum manat dies ab oriente, nisi potius quod bonum antiqui dicebant manum, ad cuiusmodi religionem Graeci quoque cum lumen affertur, solent dicere phos agathon.

Suprema summum diei, id ab superrimo. Hoc tempus XII Tabulae dicunt occasum esse solis; sed postea lex Plaetoria id quoque tempus esse iubet supremum quo praetor in Comitio supremam pronuntiavit populo. Secundum hoc dicitur crepusculum a crepero: id vocabulum sumpserunt a Sabinis, unde veniunt Crepusci nominati Amiterno, qui eo tempore erant nati, ut Lucii prima luce in Reatino; crepusculum significat dubium; ab eo res dictae dubiae creperae, quod crepusculum dies etiam nunc sit an iam nox multis dubium.

Nox, quod, ut Pacuius ait,

Omnia nisi interveniat sol pruina obriguerint,

quod nocet, nox, nisi quod Graece nux nox. Cum stella prima exorta (eum Graeci vocant hesperon, nostri Vesperuginem ut Plautus:

Neque Vesperugo neque Vergiliae occidunt),

id tempus dictum a Graecis hespera, Latine vesper; ut ante solem ortum quod eadem stella vocatur iubar, quod iubata, Pacui dicit pastor:

Exorto iubare, noctis decurso itinere;

Enni Ajax:

Lumen — iubarne? — in caelo cerno.

Inter vesperuginem et iubar dicta nox intempesta, ut in Bruto Cassii quod dicit Lucretia:

Nocte intempesta nostram devenit domum.

Intempestat Aelius dicebat cum tempus agendi est nullum, quod alii concubium appellarunt, quod omnes fere tunc cubarent; alii ab eo quod sileretur silentium noctis, quod idem Plautus tempus conticinium: scribit enim:

Videbimus: factum volo. Redito conticinio.

Alter motus solis est, aliter ac caeli, quod movetur a bruma ad solstitium. Dicta bruma, quod brevissimus tunc dies est; solstitium, quod sol eo die sistere videbatur, quo ad nos versum proximus est. Sol cum venit in medium spatium inter brumam et solstitium, quod dies aequus fit ac nox, aequinoctium dictum. Tempus a bruma ad brumam dum sol redit, vocatur annus, quod ut parvi circuli anuli, sic magni dicebantur circites ani, unde annus.

Huius temporis pars prima hiems, quod tum multi imbres; hinc hibernacula, hibernum; vel, quod tum anima quae flatur omnium apparet, ab hiatu hiems. Tempus secundum ver, quod tum virere, incipunt virgulta ac vertere se tempus anni; nisi quod Iones dicunt er ver. Tertium ab aestu aestas; hinc aestivum; nisi forte a Graeco aithesthai. Quartum autumnus, ab augendis hominum opibus dictus frugibusque coactis, quasi auctumnus.

Ut annus ab sole, sic mensis a lunae motu dictus, dum ab sole profecta rursus redit ad eum. Luna quod Graece olim dicta mene, unde illorum menes, ab eo nostri. A mensibus intermestris dictum, quod putabant inter prioris mensis senescentis extremum diem et novam lunam esse diem, quem diligentius Attici henen kai nean appellarunt, ab eo quod eo die potest videri extrema et prima luna.

Lustrum nominatum tempus quinquennale a luendo, id est solvendo, quod quinto quoque anno vectigalia et ultro tributa per censores persolvebantur. Seclum spatium annorum centum vocarunt, dictum a sene, quod longissimum spatium senescendorum hominum id putarunt. Aevum ab aetate omnium annorum (hinc aeviternum, quod factum est aeternum): quod Graeci aiona, id ait Chrysippus esse aei on. Ab eo Plautus:

Non omnis aetas ad perdiscendum est satis,

hinc poetae:

Aeterna templa caeli.

Ad naturale discrimen civilia vocabula dierum accesserunt. Dicam prius qui deorum causa, tum qui hominum sunt instituti. Dies Agonales per quos rex in Regia arietem immolat, dicti ab “agon,” eo quod interrogat minister sacrificii “agone?”: nisi si a Graeca lingua, ubi agon princeps, ab eo quod immolatur a principe civitatis et princeps gregis immolatur. Carmentalia nominantur quod sacra tum et feriae Carmentis.

Lupercalia dicta, quod in Lupercali Luperci sacra faciunt. Rex cum ferias menstruas Nonis Februariis edicit, hunc diem februatum appellat; februm Sabini purgamentum, et id in sacris nostris verbum non ignotum: nam pellem capri, cuius de loro caeduntur puellae Lupercalibus, veteres februm vocabant, et Lupercalia Februatio, ut in Antiquitatum libris demonstravi. Quirinalia a Quirino, quod ei deo feriae et eorum hominum, qui Furnacalibus suis non fuerunt feriat. Feralia ab inferis et ferendo, quod ferunt tum epulas ad sepulcrum quibus ius ibi parentare. Terminalia, quod is dies anni extremus constitutus: duodecimus enim mensis fuit Februarius et cum intercalatur inferiores quinque dies duodecimo demuntur mense. Ecurria ab equorum cursu: eo die enim ludis currunt in Martio Campo.

Liberalia dicta, quod per totum oppidum eo die sedent ut sacerdotes Liberi anus hedera coronatae cum libis et foculo pro emptore sacrificantes. In libris Saliorum quorum cognomen Agonensium, forsitan hic dies ideo appelletur potius Agonia. Quinquatrus: hic dies unus ab nominis errore observatur proinde ut sint quinque; dictus, ut ab Tusculanis post diem sextum Idus similiter vocatur Sexatrus et post diem septimum Septimatrus, sic hic, quod erat post diem quintum Idus, Quinquatrus. Dies Tubulustrium appellatur, quod eo die in Atrio Sutorio sacrorum tubae lustrantur.

Megalesia dicta a Graecis, quod ex Libris Sibyllinis arcessita ab Attalo rege Pergama; ibi prope murum Megalesion, id est templum eius deae, unde advecta Romam. Fordicidia a fordis bubus; bos forda quae fert in ventre; quod eo die publice immolantur boves praegnantes in curiis complures, a fordis caedendis Fordicidia dicta. Palilia dicta a Pale, quod ei feriae, ut Cerialia a Cerere.

Vinalia a vino; hic dies Iovis, non Veneris. Huius rei cura non levis in Latio: nam aliquot locis vindemiae primum ab sacerdotibus publice fiebant, ut Romae etiam nunc: nam flamen Dialis auspicatur vindemiam et ut iussit vinum legere, agna Iovi facit, inter cuius exta caesa et porrecta flamen primus vinum legit. In Tusculanis portis est scriptum:

Vinum novum ne vehatur in urbem ante quam Vinalia kalentur.

Robigalia dicta ab Robigo; secundum segetes huic deo sacrificatur, ne robigo occupet segetes.

Dies Vestalia ut virgines Vestales a Vesta. Quinquatrus minusculae dictae Iuniae Idus ab similitudine maiorum, quod tibicines tum feriat vagantur per urbem et conveniunt ad Aedem Minervae. Dies Fortis Fortunae appellatus ab

Servio Tullio rege, quod is fanum Fortis Fortunae secundum Tiberim extra urbem Romam dedicavit Iunio mense.

Dies Poplifugia videtur nominatus, quod eo die tumultu repente fugerit populus: non multo enim post hic dies quam decessus Gallorum ex Urbe, et qui tum sub Urbe populi, ut Ficuleates ac Fidenates et finitimi alii, contra nos coniurarunt. Aliquot huius diei vestigia fugae in sacris apparent, de quibus rebus Antiquitatum Libri plura referunt. Nonae Caprotinae, quod eo die in Latio Iunoni Caprotinae mulieres sacrificant et sub caprifico faciunt; e caprifico adhibent virgam. Cur hoc, toga praetexta data eis Apollinaribus Ludis docuit populum.

Neptunalia a Neptuno: eius enim dei feriae. Furrinalia a Furrina, quod ei deae feriae publicae, dies is; cuius deae honos apud antiquos: nam ei sacra instituta annua et flamen attributus; nunc vix nomen notum paucis. Portunalia dicta a Portuno, cui eo die aedes in portu Tiberino facta et feriae institutae.

Vinalia rustica dicuntur ante diem XIII Kalendas Septembres, quod tum Veneri dedicata aedes et horti ei deae dicantur ac tum sunt feriati holitores. Consualia dicta a Conso, quod tum feriae publicae ei deo et in Circo ad aram eius ab sacerdotibus ludi illi, quibus virgines Sabinae raptae. Volcanalia a Volcano, quod ei tum feriae et quod eo die populus pro se in ignem animalia mittit.

Opeconsiva dies ab dea Ope Consiva, cuius in Regia sacrarium quod adeo artum, eo praeter virgines Vestales et sacerdotem publicum introeat nemo. "Is cum eat, suffibulum ut habeat," scriptum: id dicitur ab suffigendo subfigabulum. Volturnalia a deo Volturmo, cuius feriae tum. Octobri mense Meditrinalia dies dictus a medendo, quod Flaccus flamen Martialis dicebat hoc die solitum vinum novum et vetus libari et degustari medicamenti causa; quod facere solent etiam nunc multi cum dicunt:

Novum vetus vinum bibo: novo veteri morbo medeor.

Fontanalia a Fonte, quod is dies feriae eius; ab eo tum et in fontes coronas iaciunt et puteos coronant. Armilustrium ab eo quod in Armilustrio armati sacra faciunt, nisi locus potius dictus ab his; sed quod de his prius, id ab ludendo aut lustrando, id est quod circumibant ludentes ancilibus armati. Saturnalia dicta ab Saturno, quod eo die feriae eius, ut post diem tertium Opalia Opis.

Angeronalia ab Angerona, cui sacrificium fit in Curia Acculeia et cuius feriae publicae is dies. Larentinae, quem diem quidam in scribendo Larentalia appellant, ab Acca Larentia nominatus, cui sacerdotes nostri publice parentant e sexto die, qui ab ea dicitur dies Parentalium Accas Larentinas.

Hoc sacrificium fit in Velabro, qua in Novam Viam exitur, ut aiunt quidam ad sepulcrum Accae, ut quod ibi prope faciunt diis Manibus servilibus sacerdotes; qui uterque locus extra urbem antiquam fuit non longe a Porta Romanula, de qua in priore libro dixi. Dies Septimontium nominatus ab his septem montibus, in quibus sita Urbs est; feriae non populi, sed montanorum modo, ut Paganalibus, qui sunt alicuius pagi.

De statutis diebus dixi; de annalibus nec die statutis dicam. Compitalia dies attributus Laribus vialibus: ideo ubi viae competunt tum in competis sacrificatur. Quotannis is dies concipitur. Similiter Latinae Feriae dies conceptivus dictus a Latinis populis, quibus ex Albano Monte ex sacris carnem petere fuit ius cum Romanis, a quibus Latinis Latinae dictae.

Sementivae Feriae dies is, qui a pontificibus dictus, appellatus a semente, quod sationis causa susceptae. Paganicae eiusdem agriculturae causa susceptae, ut haberent in agris omnis pagus, unde Paganicae dictae. Sunt praeterea feriae conceptivae quae non sunt annales, ut hae quae dicuntur sine proprio vocabulo aut cum perspicuo, ut Novendiales sunt.

IV.

De his diebus satis; nunc iam, qui hominum causa constituti, videamus. Primi dies mensium nominati Kalendae, quod his diebus calantur eius mensis Nonae a pontificibus, quintanae an septimanae sint futurae, in Capitolio in Curia Calabra sic: “Die te quinti kalo Iuno Covella” aut “Septimi die te kalo Iuno Covella.”

Nonae appellatae aut quod ante diem nonum Idus semper, aut quod, ut novus annus Kalendae Ianuariae ab novo sole appellatae, novus mensis ab nova luna Nonae; eodem die in Urbem qui in agris ad regem conveniebat populus. Harum rerum vestigia apparent in sacris Nonalibus in Arce, quod tunc ferias primas menstruas, quae futurae sint eo mense, rex edicit populo. Idus ab eo quod Tusci Itus, vel potius quod Sabini Idus dicunt.

Dies postridie Kalendas, Nonas, Idus appellati atri, quod per eos dies nihil novi inciperent. Dies fasti, per quos praetoribus omnia verba sine piaculo licet fari; comitiales dicti, quod tum ut in Comitio esset populus constitutum est ad suffragium ferendum, nisi si quae feriae conceptae essent, propter quas non liceret, ut Compitalia et Latinae.

Contrarii horum vocantur dies nefasti, per quos dies nefas fari praetorem “do,” “dico,” “addico”; itaque non potest agi: necesse est aliquo eorum uti verbo, cum lege quid peragitur. Quod si tum imprudens id verbum emisit ac quem manumisit, ille nihilo minus est liber, sed vitio, ut magistratus vitio creatus nihilo setius magistratus. Praetor qui tum fatus est, si imprudens fecit, piaculari hostia facta piatur; si prudens dixit, Quintus Mucius aiebat eum expiari ut impium non posse.

Intercisi dies sunt per quos mane et vesperi est nefas, medio tempore inter hostiam caesam et exta porrecta fas; a quo quod fas tum intercedit aut eo intercisum nefas, intercisi. Dies qui vocatur sic “Quando rex comitiavit fas,” is dictus ab eo quod eo die rex sacrificio ius dicat ad Comitium, ad quod tempus est nefas, ab eo fas: itaque post id tempus lege actum saepe.

Dies qui vocatur “Quando stercum delatum fas,” ab eo appellatus, quod eo die ex Aede Vestae stercus everritur et per Capitolinum Clivum in locum defertur certum. Dies Alliensis ab Allia fluvio dictus: nam ibi exercitu nostro fugato Galli obsederunt Romam.

Quod ad singulorum dierum vocabula pertinet dixi. Mensium nomina fere sunt aperta, si a Martio, ut antiqui constituerunt, numeres: nam primus a Marte. Secundus, ut Fulvius scribit et Iunius, a Venere, quod ea sit Aphrodite; cuius nomen ego antiquis litteris quod nusquam inveni, magis puto dictum, quod ver omnia aperit, Aprilem. Tertius a maioribus Maius, quartus a iunioribus dictus Iunius.

Dehinc quintus Quintilis et sic deinceps usque ad Decembrem a numero. Ad hos qui additi, prior a principe deo Ianuarius appellatus; posterior, ut idem dicunt scriptores, ab diis inferis Februarius appellatus, quod tum his parentetur; ego magis arbitrator Februarium a die februato, quod tum februatur populus, id est Lupercis nudis lustratur antiquum oppidum Palatinum gregibus humanis cinctum.

V.

Quod ad temporum vocabula Latina attinet, hactenus sit satis dictum; nunc quod ad eas res attinet quae in tempore aliquo fieri animadverterentur, dicam, ut haec sunt: legisti, cursus, ludens; de quis duo praedicere volo, quanta sit multitudo eorum et quae sint obscuriora quam alia.

Cum verborum declinatum genera sint quattuor, unum quod tempora adsignificat neque habet casus, ut ab lego leges, lege; alterum quod casus habet neque tempora adsignificat, ut ab lego lectio et lector; tertium quod habet utrunque et tempora et casus, ut ab lego legens, lecturus; quartum quod neutrum habet, ut ab lego lecte ac lectissime: horum verborum si primigenia sunt ad mille, ut Cosconius scribit, ex eorum declinationibus verborum discrimina quingenta milia esse possunt ideo, quod a singulis verbis primigeniis circiter quingentae species declinationibus fiunt.

Primigenia dicuntur verba ut lego, scribo, sto, sedeo et cetera, quae non sunt ab alio quo verbo, sed suas habent radices. Contra verba declinata sunt, quae ab alio quo oriuntur, ut ab lego legis, legit, legam et sic indidem hinc permulta. Quare si quis primigeniorum verborum origines ostenderit, si ea mille sunt, quingentum milium simplicium verborum causas aperuerit una; sin nullius, tamen qui ab his reliqua orta ostenderit, satis dixerit de originibus verborum, cum unde nata sint, principia erunt pauca, quae inde nata sint, innumerabilia.

A quibus iisdem principiis antepositis praeverbis paucis immanis verborum accedit numerus, quod praeverbis inmutatis additis atque commutatis aliud atque aliud fit: ut enim et processit, et recessit, sic accessit et abscessit; item incessit et excessit, sic successit et decessit, discessit et concessit. Quod si haec decem sola praeverbia essent, quoniam ab uno verbo declinationum quingenta discrimina fierent, his decemplicatis coniuncto praeverbio ex uno quinque milia numero efficerentur, ex mille ad quinquages centum milia discrimina fieri possunt.

Democritus, Epicurus, item alii qui infinita principia dixerunt, quae unde sint non dicunt, sed cuiusmodi sint, tamen faciunt magnum: quae ex his

constant in mundo, ostendunt. Quare si etymologus principia verborum postulet mille, de quibus ratio ab se non poscatur, et reliqua ostendat, quod non postulat, tamen immanem verborum expediat numerum.

De multitudine quoniam quod satis esset admonui, de obscuritate pauca dicam. Verborum quae tempora adsignificant ideo locus, difficillimus etyma, quod neque his fere societas cum Graeca lingua, neque vernacula ea quorum in partum memoria adfuerit nostra; e quibus, ut dixi, quae poterimus.

VI.

Incipiam hinc primum quod dicitur ago. Actio ab agitu facta. Hinc dicimus “agit gestum tragoedus,” et “agitantur quadrigae”; hinc “agitur pecus pastum.” Qua vix agi potest, hinc angiportum; qua nil potest agi, hinc angulus, vel quod in eo locus angustissimus, cuius loci is angulus.

Actionum trium primus agitatus mentis, quod primum ea quae sumus acturi cogitare debemus, deinde tum dicere et facere. De his tribus minime putat volgus esse actionem cogitationem; tertium, in quo quid facimus, id maximum. Sed et cum cogitamus quid et eam rem agitamus in mente, agimus, et cum pronuntiamus, agimus. Itaque ab eo orator agere dicitur causam et augures augurium agere dicuntur, quom in eo plura dicant quam faciant.

Cogitare a cogendo dictum: mens plura in unum cogit, unde eligere possit. Sic e lacte coacto caseus nominatus; sic ex hominibus contio dicta, sic coemptio, sic compitum nominatum. A cogitatione concilium, inde consilium; quod ut vestimentum apud fullonem cum cogitur, conciliari dictum.

Sic reminisci, cum ea quae tenuit mens ac memoria, cogitando repetuntur. Hinc etiam comminisci dictum, a con et mente, cum finguntur in mente quae non sunt; et ab hoc illud quod dicitur eminisci, cum commentum pronuntiatur. Ab eadem mente meminisse dictum et amens, qui a mente sua discedit.

Hinc etiam metus a mente quodam modo mota, ut metuisti te amovisti; sic, quod frigidus timor, tremuisti timuisti. Tremo dictum a similitudine vocis, quae tunc cum valde tremunt apparet, cum etiam in corpore pili, ut arista in spica hordei, horrent.

Curare a cura dictum. Cura, quod cor urat; curiosus, quod hac praeter modum utitur. Recordari, rursus in cor revocare. Curiae, ubi senatus rempublicam curat, et illa ubi cura sacrorum publica; ab his curiones.

Volo a voluntate dictum et a volatu, quod animus ita est, ut puncto temporis pervolet quo volt. Lubere ab labendo dictum, quod lubrica mens ac prolabitur, ut dicebant olim. Ab lubendo libido, libidinosus ac Venus Libentina et Libitina, sic alia.

Metuere a quodam motu animi, cum id quod malum casurum putat refugit mens. Cum vehementius in movendo ut ab se abeat foras fertur, formido; cum parum movetur pavet, et ab eo pavor.

Meminisse a memoria, cum in id quod remansit in mente rursus movetur; quae a manendo ut manimoria potest esse dicta. Itaque Salii quod cantant:

Mamuri Veturi,

significant memoriam veterem. Ab eodem monere, quod is qui monet, proinde sit ac memoria; sic monimenta quae in sepulcris, et ideo secundum viam, quo praetereuntis admoneant et se fuisse et illos esse mortalis. Ab eo cetera quae scripta ac facta memoriae causa monimenta dicta.

Maerere a marcere, quod etiam corpus marcesceret; hinc etiam macri dicti. Laetari ab eo quod latius gaudium propter magni boni opinionem diffusum. Itaque Iuuentius ait:

Gaudia

Sua si omnes homines conferant unum in locum,
Tamen mea exsuperet laetitia.

Sic cum se habent, laeta.

VII.

Narro, cum alterum facio narum, a quo narratio, per quam cognoscimus rem gestam. Quae pars agendi est ab dicendo ac sunt aut coniuncta cum temporibus aut ab his: eorum hoc genus videntur etyma.

Fatur is qui primum homo significabilem ore mittit vocem. Ab eo, ante quam ita faciant, pueri dicuntur infantes; cum id faciunt, iam fari; cum hoc vocabulum, tum a similitudine vocis pueri fariolus ac fatuus dictum. Ab hoc tempora quod tum pueris constituent Parcae fando, dictum fatum et res fatales. Ab hac eadem voce qui facile fantur facundi dicti, et qui futura praedivinando soleant fari fatidici; dicti idem vaticinari, quod vesana mente faciunt: sed de hoc post erit usurpandum, cum de poetis dicemus.

Hinc fasti dies, quibus verba certa legitima sine piaculo praetoribus licet fari; ab hoc nefasti, quibus diebus ea fari ius non est et, si fati sunt, piaculum faciunt. Hinc effata dicuntur, qui augures finem auspiciorum caelestum extra urbem agris sunt effati ut esset; hinc effari templa dicuntur: ab auguribus effantur qui in his fines sunt.

Hinc fana nominata, quod pontifices in sacrando fati sint finem; hinc profanum, quod est ante fanum coniunctum fano; hinc profanatum quid in sacrificio atque Herculi decuma appellata ab eo est quod sacrificio quodam fanatur, id est ut fani lege fit. Id dicitur polluctum, quod a porriciendo est fictum: cum enim ex mercibus libamenta porrecta sunt Herculi in aram, tum polluctum est, ut cum profanatum dicitur, id est proinde ut sit fani factum: itaque ibi olim in fano consumebatur omne quod profanatum erat, ut etiam nunc fit quod praetor urbanus quotannis facit, cum Herculi immolat publice iuencam.

Ab eodem verbo fari fabulae, ut tragoediae et comoediae, dictae. Hinc fassi ac confessi, qui fati id quod ab is quaesitum. Hinc professi; hinc fama et famosi. Ab eodem falli, sed et falsum et fallacia, quae propterea, quod fando quem decipit ac contra quam dixit facit. Itaque si quis re fallit, in hoc non proprio nomine fallacia, sed tralaticio, ut a pede nostro pes lecti ac betae. Hinc

etiam famigerabile et sic compositicia alia item ut declinata multa, in quo et Fatuus et Fatuae.

Loqui ab loco dictum. Quod qui primo dicitur iam fari vocabula et reliqua verba dicit ante quam suo quique loco ea dicere potest, hunc Chrysippus negat loqui: quare ut imago hominis non sit homo sic in corvis, cornicibus, pueris primitus incipientibus fari verba non esse verba, quod non loquantur. Igitur is loquitur, qui suo loco quodque verbum sciens ponit, et is tum prolocutus, quom in animo quod habuit extulit loquendo.

Hinc dicuntur eloqui ac reloqui in fanis Sabinis, e cella dei qui loquuntur. Hinc dictus loquax, qui nimium loqueretur; hinc eloquens, qui copiose loquitur; hinc colloquium, cum veniunt in unum locum loquendi causa; hinc adlocutum mulieres ire aiunt, cum eunt ad aliquam locutum consolandi causa; hinc quidam loquelam dixerunt verbum quod in loquendo efferimus. Concinne loqui dictum a concinere, ubi inter se conveniunt partes ita ut inter se concinant aliud alii.

Pronuntiare dictum a pro et nuntiare; pro idem valet quod ante, ut in hoc: proludit. Ideo actores pronuntiare dicuntur, quod in proscaenio enuntiant poetae cogitata, quod maxime tum dicitur proprie, novam fabulam cum agunt. Nuntius enim est a novis rebus nominatus, quod a verbo Graeco potest declinatum; ab eo itaque Neapolis illorum Novapolis ab antiquis vocitata nostris.

A quo etiam extremum novissimum quoque dici coeptum volgo, quod mea memoria ut Aelius sic senes aliquot, nimium novum verbum quod esset, vitabant; cuius origo, ut a vetere vetustius ac veterimum, sic ab novo declinatum novius et novissimum, quod extremum. Sic ab eadem origine novitas et novicius et novalis in agro et “sub Novis” dicta pars in Foro aedificiorum, quod vocabulum ei pervetustum, ut Novae Viae, quae via iam diu vetus.

Ab eo quoque potest dictum nominare, quod res novae in usum quom additae erant, quibus eas novissent, nomina ponebant. Ab eo nuncupare, quod tunc pro civitate vota nova suscipiuntur. Nuncupare nominare valere apparet in legibus, ubi “nuncupatae pecuniae” sunt scriptae; item in Choro in quo est:

Aeneae! — Quis is est qui meum nomen nuncupat?

Item in Medo:

Quis tu es, mulier, quae me insueto nuncupasti nomine?

Dico originem habet Graecam, quod Graeci deiknyo. Hinc etiam dicare, ut ait, Ennius:

Dico VI hunc dicare circum metulas.

Hinc iudicare, quod tunc ius dicitur; hinc iudex, quod ius dicat accepta potestate; hinc dedicat, id est quibusdam verbis dicendo finit: sic, enim aedis sacra a magistratu pontifice praeunte, dicendo dedicatur. Hinc, ab dicendo, indicium; hinc illa: indicit bellum, indixit funus, prodixit diem, addixit iudicium; hinc appellatum dictum in mimo, ac dictiosus; hinc in manipulis castrensibus dicta ab ducibus; hinc dictata in ludo; hinc dictator magister

populi, quod is a consule debet dici; hinc antiqua illa addici numo et dicis causa et addictus.

Si dico quid sciens nescienti, quod ei quod ignoravit trado, hinc doceo declinatum vel quod cum docemus dicimus vel quod qui docentur inducuntur in id quod docentur. Ab eo quod scit ducere qui est dux aut ductor; hinc doctor qui ita inducit, ut doceat. Ab ducendo docere disciplina discere litteris commutatis paucis. Ab eodem principio documenta, quae exempla docendi causa dicuntur.

Disputatio et computatio e propositione putandi, quod valet purum facere; ideo antiqui purum putum appellarunt; ideo putator, quod arbores puras facit; ideo ratio putari dicitur, in qua summa fit pura: sic is sermo in quo pure disponuntur verba, ne sit confusus atque ut diluceat, dicitur disputare.

Quod dicimus disserit item translaticio aequae ex agris verbo: nam ut holitor disserit in areas sui cuiusque generis res, sic in oratione qui facit, disertus. Sermo, opinor, est a serie, unde sarta; etiam in vestimento sartum, quod comprehensum: sermo enim non potest in uno homine esse solo, sed ubi oratio cum altero coniuncta. Sic conserere manum dicimur cum hoste; sic ex iure manum consertum vocare; hinc adserere manu in libertatem cum prendimus. Sic augures dicunt:

Si mihi auctor es verbenam manu asserere, dicito consortes.

Hinc etiam, a quo ipsi consortes, sors; hinc etiam sortes, quod in his iuncta tempora cum hominibus ac rebus; ab his sortilegi; ab hoc pecunia quae in faenore sors est, impendium quod inter se iungit.

Legere dictum, quod leguntur ab oculis litterae; ideo etiam legati, quod ut publice mittantur leguntur. Item ab legendo leguli, qui oleam aut qui uvas legunt; hinc legumina in frugibus variis; etiam leges, quae lectae et ad populum latae quas observet. Hinc legitima et collegae, qui una lecti, et qui in eorum locum suppositi, sublecti; additi allekti et collecta, quae ex pluribus locis in unum lecta. Ab legendo ligna quoque, quod ea caduca legebantur in agro quibus in focum uterentur. Indidem ab legendo legio et diligens et dilectus.

Murmurari a similitudine sonitus dictus, qui ita leviter loquitur, ut magis e sono id facere quam ut intellegatur videatur. Hinc etiam poetae

Murmurantia litora.

Similiter fremere, gemere, clamare, crepare ab similitudine vocis sonitus dicta. Hinc illa

Arma sonant, fremor oritur;

hinc

Nihil me increpitando commoves.

Vicina horum quiritare, iubilare. Quiritare dicitur is qui Quiritum fidem clamans inplorat. Quirites a Curensibus; ab his cum Tatio rege in societatem venerunt civitatis. Ut quiritare urbanorum, sic iubilare rusticorum: itaque hos imitans Aprissius ait:

Io bucco! — Quis me iubilat?
Vicinus tuus antiquus.

Sic triumphare appellatum, quod cum imperatore milites redeuntes clamitant per Urbem in Capitolium eunti “Io triumphe”; id a thriamboi ac Graeco Liberi cognomento potest dictum.

Spondere est dicere spondeo, a sponte: nam id idem valet et a voluntate. Itaque Lucilius scribit de Cretaea, cum ad se cubitum venerit sua voluntate, sponte ipsam suapte adductam, ut tunicam et cetera reiceret. Eandem uoluntatem Terentius significat, cum ait satius esse

Sua sponte recte facere quam alieno metu.

Ab eadem sponte, a qua dictum spondere, declinatum despondet et respondet et desponsor et sponsa, item sic alia. Spondet enim qui dicit a sua sponte “spondeo”; qui spondit, est sponsor; qui idem ut faciat obligatur sponsu, consponsus.

Hoc Naevius significat cum ait “consponsi.” Si spondebatur pecunia aut filia nuptiarum causa, appellabatur et pecunia et quae desponsa erat sponsa; quae pecunia inter se contra sponsu rogata erat, dicta sponsio; cui desponsa quae erat, sponsus; quo die sponsum erat, sponsalis.

Qui sponderat filiam, despondisse dicebant, quod de sponte eius, id est de voluntate, exierat: non enim si volebat, dabat, quod sponsu erat alligatus: nam ut in comoediis vides dici:

Sponden tuam gnatam filio uxorem meo?

Quod tum et praetorium ius ad legem et censorium iudicium ad aequum existimabatur. Sic despondisse animum quoque dicitur, ut despondisse filiam, quod suae spontis statuerat finem.

A sua sponte dicere cum spondere, respondere quoque dixerunt, cum ad spontem responderent, id est ad voluntatem rogatoris. Itaque qui ad id quod rogatur non dicit, non respondet, ut non spondet ille statim qui dixit spondeo, si iocandi causa dixit, neque agi potest cum eo ex sponsu. Itaque is quoi dicitur in comoedia:

Meministin te spondere mihi gnatam tuam?

quod sine sponte sua dixit, cum eo non potest agi ex sponsu.

Etiā spes a sponte potest esse declinata, quod tum sperat cum quod volt fieri putat: nam quod non volt si putat, metuit, non sperat. Itaque hi quoque qui dicunt in Astraba Plauti:

Nunc sequere adseque, Polybadisce, meam spem
cupio consequi.

Sequor hercle equidem, nam libenter meam
speratam consequor:

quod sine sponte dicunt, vere neque ille sperat qui dicit adolescens neque illa quae sperata est.

Sponsor et praes et vas neque idem, neque res a quibus hi, sed e re simili.

Itaque praes qui a magistratu interrogatus, in publicum ut praestet; a quo et cum respondet, dicit “praes”. Vas appellatus, qui pro alto vadimonium promittebat. Consuetudo erat, cum reus parum esset idoneus inceptis rebus, ut pro se alium daret; a quo caveri postea lege coeptum est ab his, qui praedia venderent, vadem ne darent; ab eo ascribi coeptum in lege mancipiorum:

Vadem ne poscerent nec dabitur.

Canere, accanire et succanire ut canto et cantatio ex Camena permutato pro M N. Ab eo quod semel, canit, si saepius, cantat. Hinc cantitat, item alia; nec sine canendo tubicines, liticines, cornicines, tibicines dicti: omnium enim horum quodam canere; etiam bucinator a vocis similitudine et cantu dictus.

Oro ab ore et perorat et exorat et oratio et orator et osculum dictum. Indidem omen, ornamentum; alterum quod ex ore primum elatum est, osmen dictum; alterum nunc cum propositione dicitur vulgo ornamentum, quod sicut olim ornamenta scaenici plerique dicunt. Hinc oscines dicuntur apud augures, quae ore faciunt auspicium.

VIII.

Tertium gradum agendi esse dicunt, ubi quid faciant; in eo propter similitudinem agendi et faciendi et gerendi quidam error his qui putant esse unum. Potest enim aliquid facere et non agere, ut poeta facit fabulam et non agit, contra actor agit et non facit, et sic a poeta fabula fit, non agitur, ab actore agitur, non fit. Contra imperator quod dicitur res gerere, in eo neque facit neque agit, sed gerit, id est sustinet, tralatum ab his qui onera gerunt, quod hi sustinent.

Proprio nomine dicitur facere a facie, qui rei quam facit imponit faciem. Ut fictor cum dicit fingo, figuram imponit, quom dicit formo, formam, sic cum dicit facio, faciem imponit; a qua facie discernitur, ut dici possit aliud esse vestimentum, aliud vas, sic item quae fiunt apud fabros, fictores, item alios alia. Qui quid administrat, cuius opus non extat quod sub sensum veniat, ab agitato, ut dixi, magis agere quam facere putatur; sed quod his magis promiscue quam diligenter consuetudo est usa, translaticiis utimur verbis: nam et qui dicit, facere verba dicimus, et qui aliquid agit, non esse inficientem.

Et facere lumen, faculam qui adlucet, dicitur. Lucere ab luere, quod et luce dissolvuntur tenebrae; ab luce Noctiluca, quod propter lucem amissam is cultus institutus. Acquirere est ad et quaerere; ipsum quaerere ab eo quod quae res ut reciperetur datur opera; a quaerendo quaestio, ab his tum quaestor.

Video a visu, id a vi: quinque enim sensuum maximus in oculis: nam cum sensus nullus quod abest mille passus sentire possit, oculorum sensus vis usque pervenit ad stellas. Hinc:

Visenda vigilant, vigiliam invident.

Et Acci:

Cum illud oculis violavit is, qui invidit invidendum.

A quo etiam violavit virginem pro vitiavit dicebant; aequae eadem modestia potius cum muliere fuisse quam concubuisse dicebant.

Cerno idem valet: itaque pro video ait Ennius:

Lumen — iubarne? — in caelo cerno.

Cassius:

Sensumque inesse et motum in membris cerno.

Dictum cerno a cereo, id est a creando; dictum ab eo quod cum quid creatum est, tunc denique videtur. Hinc fines capilli discripti, quod finis videtur, discrimen; et quod in testamento cernito, id est facito videant te esse heredem: itaque in cretione adhibere iubent testes. Ab eodem est quod ait Medea:

Ter sub armis malim vitam cernere,

Quam semel modo parere;

quod, ut decernunt de vita eo tempore, multorum videtur vitae finis.

Spectare dictum ab specio antiquo, quo etiam Ennius usus:

Quos Epulo postquam spexit,

et quod in auspiciis distributum est qui habent spectionem, qui non habeant, et quod in auguriis etiam nunc augures dicunt avem specere. Consuetudo communis quae cum praeverbis coniuncta fuerunt etiam nunc servat, ut aspicio, conspicio, respicio, suspicio, despicio, sic alia; in quo etiam expecto quod spectare volo. Hinc speculor, hinc speculum, quod in eo specimus imaginem. Specula, de quo prospicimus. Speculator, quem mittimus ante, ut respiciat quae volumus. Hinc qui oculos inunguimus quibus specimus, specillum.

Ab auribus verba videntur dicta audio et ausculto; aures ab aveo, quod his avemus discere semper, quod Ennius videtur etymon, ostendere velle in Alexandro cum ait:

Iam dudum ab ludis animus atque aures avent,

Avide expectantes nuntium.

Propter hanc aurium aviditatem theatra replentur. Ab audiendo etiam auscultare declinatum, quod hi auscultare dicuntur qui auditis parent, a quo dictum poetae:

Audio, haut ausculto.

Littera commutata dicitur odor olor, hinc olet et odorari et odoratus et odora res, sic alia.

Ore edo, sorbeo, bibo, poto. Edo a Graeco edo, hinc esculentum et esca et edulia; et quod Graece genetai, Latine gustat. Sorbere, item bibere a vocis sono, ut fervere aquam ab eius rei simili sonitu. Ab eadem lingua, quod poton, potio, unde poculum, potatio, repotia. Indidem puteus, quod sic Graecum antiquum, non ut nunc phrear dictum.

A manu manupretium; mancipium, quod manu capitur; quod coniungit plures manus, manipulus; manipularis, manica. Manubrium, quod manu tenetur. Mantelium, ubi manus terguntur * * *

Nunc primum ponam de Censoriis Tabulis:

Ubi noctu in templum censor auspicaverit atque de caelo nuntium erit, praeconi sic imperato ut viros vocet: “Quod bonum fortunatum felix salutareque siet populo Romano Quiritibus reique publicae populi Romani Quiritium mihiq[ue] collegaeque meo, fidei magistratuique nostro: omnes Quirites pedites armatos, privatosque, curatores omnium tribuum, si quis pro se sive pro altero rationem dari volet, voca inlicium huc ad me.”

Praeco in templo primum vocat, postea de moeris item vocat. Ubi lucet, censores scribae magistratus murra unguentisque unguentur. Ubi praetores tribunique plebei quique inlicium vocati sunt venerunt, censores inter se sortiuntur, uter lustrum faciat. Ubi templum factum est, post tum conventionem habet qui lustrum conditurus est.

In Commentariis Consularibus scriptum sic inveni:

Qui exercitum imperaturus erit, accenso dicito: “C. Calpurni, voca inlicium omnes Quirites huc ad me.” Accensus dicit sic: “Omnes Quirites, inlicium vos ite huc ad iudices.” “C. Calpurni,” cos. dicit, “voca ad conventionem omnes Quirites huc ad me.” Accensus dicit sic: “Omnes Quirites, ite ad conventionem huc ad iudices.” Dein consul eloquitur ad exercitum: “Impero qua convenit ad comitia centuriata.”

Quare hic accenso, illic praeconi dicit, haec est causa: in aliquot rebus item ut praeco accensus acciebat, a quo accensus quoque dictus. Accensum solitum ciere Boeotia ostendit, quam comoediam, alii Plauti, alii Aquili esse dicunt, hoc versu:

Ubi primum accensus clamarat meridiem.

Hoc idem Cosconius in Actionibus scribit praetorem accensum solitum esse iubere, ubi ei videbatur horam esse tertiam, inclamare horam tertiam esse, itemque meridiem et horam nonam.

Circum muros mitti solitum, quo modo inliceret populum in eum locum, unde vocare posset ad contionem, non solum ad consules et censores, sed etiam quaestores, Commentarium indicat vetus Anquisitionis M'. Sergii, Mani filii, quaestoris, qui capitis accusavit Trogum; in qua sic est:

Auspicio operam des et in templo auspices, tum aut ad praetorem aut ad consulem mittas auspiciu[m] petitu[m]; comitiatu[m] praetor reu[m] vocet ad te, et eum de muris vocet praeco; id imperare oportet. Cornicinem ad privati ianuam et in Arcem mittas, ubi canat. Collegam roges ut comitia edicat de rostris et argentarii tabernas occludant. Patres censeant exquaeras et adesse iubeas; magistratus censeant exquaeras, consules praetores tribunosque plebis collegasque tuos, et in templo adesse iubeas omnes; ac cum mittas, contionem advoces.

In eodem Commentario Anquisitionis ad extremum scriptum caput edicti hoc est:

Item quod attingat qui de censoribus classicum ad comitia centuriata redemptum habent, uti curent eo die quo die comitia erunt, in Arce classicus canat circumque muros et ante privati huiusce T. Quinti Trogi scelerosi ostium canat, et ut in Campo cum primo luci adsiet.

Inter id cum circum muros mittitur et cum contio advocatur, interesse tempus apparet ex his quae interea fieri inlicium scriptum est; sed ad comitatum vocatur populos ideo, quod alia de causa hic magistratus non potest exercitum urbanum convocare; censor, consul, dictator, interrex potest, quod censor exercitum centuriato constituit quinquennalem, cum lustrare et in urbem ad vexillum ducere debet; dictator et consul in singulos annos, quod hic exercitui imperare potest quo eat, id quod propter centuriata comitia imperare solent.

Quare non est dubium, quin hoc inlicium sit, cum circum muros itur, ut populus inliciat ad magistratus conspectum, qui viros vocare potest, in eum locum unde vox ad contionem vocantis exaudiri possit. Quare una origine illici et inlicis quod in Choro Proserpinae est, et pellexit, quod in Hermiona est, cum ait Pacuius:

Regni alieni cupiditas
Pellexit.

Sic Elicii Iovis ara in Aventino, ab eliciendo.

Hoc nunc aliter fit atque olim, quod augur consuli adest tum cum exercitus imperatur ac praeit quid eum dicere oporteat. Consul auguri imperare solet, ut inlicium vocet, non accenso aut praeconi. Id inceptum credo, cum non adesset accensus; et nihil intererat cui imperaret, et dicis causa fiebant quaedam neque item facta neque item dicta semper. Hoc ipsum inlicium scriptum inveni in M. Iunii Commentariis; quod tamen inlex apud Plautum in Persa est qui legi non paret, ibidem est quod illicit illex, fit quod I cum E et C cum G magnam habet communitatem.

X.

Sed quoniam in hoc de paucis rebus verba feci plura, de pluribus rebus verba faciam pauca, et potissimum quae in Graeca lingua putant Latina, ut scalpere a skaleuein, sternere a stronnyein, lingere a lichmasthai, i ab ithi, ite ab ite, gignitur a gignetai, ferte a pherete, providere a proidein, errare ab errein, ab eo quod dicunt strangalan strangulare, tinguere a tengein. Praeterea depsera a depsesai; ab eo quod illi malassein nos malaxare, ut gargarissare ab anagargarizesthai, putere a pythesthai, domare a damazein, mulgere ab amelgein, pectere a pekein, stringere a stlengizein: id enim a stlengis, ut runcinare a runcina, cuius rhykane origo Graeca.

XI.

Quod ad origines verborum huius libri pertinet, satis multas arbitror positas huius generis; desistam, et quoniam de hisce rebus tris libros ad te mittere institui, de oratione soluta duo, poetica unum, et ex soluta oratione ad te misi duo, priorem de locis et quae in locis sunt, hunc de temporibus et quae cum his sunt coniuncta, deinceps in proximo de poeticis verborum originibus scribere incipiam.

LIBER VII

I.

Difficilia sunt explicatu poetarum vocabula. Saepe enim significationem aliquam prioribus temporibus impositam repens ruina operuit, aut verbum quod conditum est e quibus litteris oportet inde post aliqua dempta, sic obscurior fit voluntas impositoris. Non reprehendendum igitur in illis qui in scrutando verbo litteram adiciunt aut demunt, quo facilius quid sub ea voce subsit videri possit: ut enim facilius obscuram operam Myrmecidis ex ebore oculi videant, extrinsecus admovent nigras setas.

Cum haec amminicula addas ad eruendum voluntatem impositoris, tamen latent multa. Quod si poetice quae in carminibus servavit multa prisca quae essent, sic etiam cur essent posuisset, fecundius poemata ferrent fructum; sed ut in soluta oratione sic in poematis verba non omnia quae habent etuma possunt dici, neque multa ab eo, quem non erunt in lucubratione litterae prosecutae, multum licet legeret. Aelii hominis in primo in litteris Latinis exercitati interpretationem Carminum Saliorum videbis et exili littera expeditam et praeterita obscura multa.

Nec mirum, cum non modo Epimenides sopore post annos L experrectus a multis non cognoscatur, sed etiam Teucer Livii post XV annos ab suis qui sit ignoretur. At hoc quid ad verborum poeticorum aetatem? Quorum si Pompili regnum fons in Carminibus Saliorum neque ea ab superioribus accepta, tamen habent DCC annos. Quare cur scriptoris industriam reprehendas qui herois tritavum, atavum non potuerit reperire, cum ipse tui tritavi matrem dicere non possis? Quod intervallum multo tanto propius nos, quam hinc ad initium Saliorum, quo Romanorum prima verba poetica dicunt Latina.

Igitur de originibus verborum qui multa dixerit commode, potius boni consulendum, quam qui aliquid nequierit reprehendendum, praesertim quom dicat etymologice non omnium verborum posse dici causam, ut qui ac qua res utilis sit ad medendum medicina; neque si non norim radices arboris, non posse me dicere pirum esse ex ramo, ramum ex arbore, eam ex radicibus quas non video. Quare qui ostendit equitatum esse ab equitibus, equites ab equite, equitem ab equo neque equus unde sit dicit, tamen hic docet plura et satisfacit grato, quem imitari possimusne ipse liber erit indicio.

II.

Dicam in hoc libro de verbis quae a poetis sunt posita, primum de locis, dein quae in locis sunt, tertio de temporibus, tum quae cum temporibus sunt coniuncta, sed is ut quae cum his sint coniuncta, adiungam, et si quid excedit ex hac quadripartitione, tamen in ea ut comprehendam.

Incipiam hinc:

Unus erit quem tu tolles in caerula caeli Templa.

Templum tribus modis dicitur: ab natura, ab auspicando, a similitudine; ab natura in caelo, ab auspiciis in terra, a similitudine sub terra. In caelo templum dicitur, ut in Hecuba:

O magna templa caelitum, commixta stellis splendidis.

In terra, ut in Periboea:

Scrupea saxea Bacchi

Templa prope aggreditur.

Sub terra, ut in Andromacha:

Acherusia templa alta Orci, salvete, infera.

Quaqua intuiti erant oculi, a tuendo primo templum dictum: quocirca caelum qua attuimur dictum templum; sic:

Contremuit templum magnum Iovis altitonantis,

id est, ut ait Naevius,

Hemisphaerium ubi concavo

Caerulo septum stat.

Eius templi partes quattuor dicuntur, sinistra ab oriente, dextra ab occasu, antica ad meridiem, postica ad septemtrionem.

In terris dictum templum locus augurii aut auspicii causa quibusdam conceptis verbis finitus. Concipitur verbis non isdem usque quaque; in Arce sic:

Templa tescaque me ita sunt, quoad ego ea rite lingua nuncupavero.

Olla vera arbos quirquir est, quam me sentio dixisse, templum tescumque me esto in sinistrum.

Olla vera arbos quirquir est, quam me sentio dixisse, templum tescumque me esto in dextrum.

Inter ea conregione conspiciione cortumione, utique ea rite dixisse me sensi.

In hoc templo faciundo arbores constitui fines apparet et intra eas regiones qua oculi conspiciant, id est tueamur, a quo templum dictum, et contemplare, ut apud Ennium in Medea:

Contempla et templum Cereris ad laevam aspice.

Contempla et conspicare idem esse apparet, ideo dicere tum, cum templum facit, augurem conspiciione, qua oculorum conspectum finiat. Quod cum dicunt conspiciorem, addunt cortumionem, dicitur a cordis visu: cor enim cortumionis origo.

Quod addit templa ut sint tesca, aiunt sancta esse qui glossas scripserunt. Id est falsum: nam Curia Hostilia templum est et sanctum non est; sed hoc ut putarent aedem sacram esse templum, eo videtur esse factum quod in urbe Roma pleraeque aedes sacrae sunt templa, eadem sancta, et quod loca quaedam agrestia, quae, alicuius dei sunt, dicuntur tesca.

Nam apud Accium in Philocteta Lemnio:

Quis tu es mortalis, qui in deserta et tesca te apportes loca?
Ea enim loca quae sint designat, cum dicit:

Lemnia praesto
Litora rara, et celsa Cabirum
Delubra tenes, mysteria quae
Pristina castis concepta sacris.

Dein:

Volcania iam templa sub ipsis
Collibus, in quos delatus locos
Dicitur alto ab limine caeli.

Et:

Nemus expirante vapore vides,
Unde ignis cluet mortalibus clam
Divisus.

Quare haec quod tesca dixit, non erravit, neque ideo quod sancta, sed quod ubi mysteria fiunt attuentur, tuesca dicta.

Tueri duo significat, unum ab aspectu ut dixi, unde est Ennii illud:
Tueor te, senex? Pro Iupiter!

Et:

Quis pater aut cognatus volet vos contra tueri?

Alterum a curando ac tutela, ut cum dicimus, “vellet tueri villam,” a quo etiam quidam dicunt illum qui curat aedes sacras aedituum, non aeditumum; sed tamen hoc ipsum ab eadem est profectum origine, quod quem volumus domum curare dicimus “tu domi videbis,” ut Plautus cum ait:

Intus para, cura, vide. Quod opust fiat.

Sic dicta vestispica, quae vestem spiceret, id est videret vestem ac tueretur.
Quare a tuendo et templa et tesca dicta cum discrimine eo quod dixi.

Etiam indidem illud Ennii:

Extemplo acceptam me necato et filiam.

Extemplo enim est continuo, quod omne templum esse debet continuo septum nec plus unum introitum habere.

Quod est apud Accium:

Pervade polum, splendida mundi
Sidera, bigis, bis continuis
Sex expicti signis,

polus Graecum, id significat circum caeli: quare quod est pervade polum valet vade peri polon. Signa dicuntur eadem et sidera. Signa quod aliquid significant, ut libra aequinoctium; sidera, quae quasi insidunt atque ita

significant aliquid in terris perurendo aliave qua re: ut signum candens in pecore.

Quod est:

Terrarum anfracta revisam,

anfractum est flexum, ab origine duplici dictum, ab ambitu et frangendo: ab eo leges iubent in directo pedum VIII esse viam, in anfracto XVI, id est in flexu.

Ennius:

Ut tibi

Titanis Trivia dederit stirpem liberum.

Titanis Trivia Diana est, ab eo dicta Trivia, quod in trivio ponitur fere in oppidis Graecis, vel quod luna dicitur esse, quae in caelo tribus viis movetur, in altitudinem et latitudinem et longitudinem. Titanis dicta, quod eam genuit, ut ait Plautus, Lato; ea, ut scribit Manilius,

Est Coeo creata Titano.

Ut idem scribit:

Latona pariet casta complexu Iovis

Deliadas geminos,

id est Apollinem et Dianam. Dii, quod Titanis Deli eos peperit, Deliadae.

Eidem:

O sancte Apollo, qui umbilicum certum terrarum optines.

Umbilicum dictum aiunt ab umbilico nostro, quod is medius locus sit terrarum, ut umbilicus in nobis; quod utrumque est falsum: neque hic locus est terrarum medius neque noster umbilicus est hominis medius. Itaque pingitur quae vocatur antichthon Pythagora, ut media caeli ac terrae linea ducatur infra umbilicum per id quo discernitur homo mas an femina sit, ubi ortus humanus similis ut in mundo: ibi enim omnia nascuntur in medio, quod terra mundi media. Praeterea si quod medium id est umbilicus pilae terrae, non Delphi medium; et terrae medium — non hoc, sed quod vocant — Delphis in aede ad latus est quiddam ut thesauri specie, quod Graeci vocant omphalon, quem Pythonos aiunt esse tumulum; ab eo nostri interpretes omphalon umbilicum dixerunt.

Pacuius:

Calydonia altrix terra exsuperantum virum.

Ut ager Tusculanum, sic Calydonius ager est, non terra; sed lege poetica, quod terra Aetolia in qua Calydon, a parte totam accipi Aetoliam voluit.

Acci:

Mystica ad dextram vada

Praetervecti.

Mystica a mysteriis, quae ibi in propinquis locis nobilia fiunt.

Ennii:

Areopagitae quia dedere aequam pilam.

Areopagitae ab Areopago; is locus, Athenis.

Musae quae pedibus magnum pulsatis Olympum.

Caelum dicunt Graeci Olympum, montem in Macedonia omnes; a quo potius puto Musas dictas Olympiadas: ita enim ab terrestribus locis aliis cognominatae Libethrides, Pipleides, Thespiades, Heliconides.

Cassi

Hellespontum et claustra.

Claustra, quod Xerxes quondam eum locum clausit: nam, ut Ennius ait,

Isque Hellesponto pontem contendit in alto.

Nisi potius ab eo quod Asia et Europa ibi concluditur mare; inter angustias facit Propontidis fauces.

Pacui:

Linqui in Aegeo fretu.

Dictum fretum ab similitudine ferventis aquae, quod in fretum saepe concurrat aestus atque effervescat. Aegeum dictum ab insulis, quod in eo mari scopuli in pelago vocantur ab similitudine caprarum aeges.

Ferre aderant aequore in alto ratibus repentibus.

Mare appellatum aequor, quod aequatum cum commotum vento non est. Ratis navis longas dixit, ut Naevius cum ait:

Ut conferre queant ratem aeratam qui

Per liquidum mare sudantes eunt atque sedentes.

Ratis dicta navis longa propter remos, quod hi, cum per aquam sublati sunt dextra et sinistra, duas rates efficere videntur: ratis enim, unde hoc tralatum, illi ubi plures mali aut asseres iuncti aqua ducuntur. Hinc naviculae cum remis ratariae dicuntur.

III.

* * * hostias agrestis ab agro dictas apparet; infulatas hostias, quod velamenta his e lana quae adduntur, infulae: itaque tum, quod ad sepulcrum ferunt frondem ac flores, addidit:

Non lana sed velatas frondenti coma.

Cornuta taurum umbra in pugnam lacit.

Dicere apparet cornutam a cornibus; cornua a curvore dicta, quod pleraque curva.

Musas quas memorant nosces nos esse

Camenas.

Casmenarum priscum vocabulum ita natum ac scriptum est alibi;

Carmenae ab eadem origine sunt declinatae. In multis verbis in quo antiqui dicebant S, postea dicunt R, ut in Carmine Saliorum sunt haec:

Cozeui oborieso. Omnia vero ad Patulcium commissei.

Ianeus iam es, duonus Cerus es, duonus Ianus.

Venies potissimum melios eum recum * * *

* * * foedesum foederum, plusima plurima, meliose meliorem, asenam arenam, ianitos ianitor. Quare e Casmena Carmena, e Carmena R extrito Camena factum. Ab eadem voce canite, pro quo in Saliari versu scriptum est cante, hoc versu:

Divum em pa cante, divum deo supplicate.

In Carmine Priami quod est:

Veteres Casmenas cascam rem volo profarier,

primum cascum significat vetus; secundo eius origo Sabina, quae usque radices in Oscam linguam egit. Cascum vetus esse significat Ennius quod ait:

Quam Prisci casci populi tenuere Latini.

Eo magis Manilius quod ait:

Cascum duxisse cascam non mirabile est,

Quoniam cariosas conficiebat nuptias.

Item ostendit Papini epigrammation, quod in adolescentem fecerat Cascam:

Ridiculum est, cum te Cascam tua dicit amica,

Filia Potoni, sesquisenex puerum.

Dic tu illam pusam: sic fiet “mutua muli”:

Nam vere pusus tu, tua amica senex.

Idem ostendit quod oppidum vocatur Casinum (hoc enim ab Sabinis orti Samnites tenuerunt) et nostri etiam nunc Forum Vetus appellant. Item significat in Atellanis aliquot Pappum, senem quod Osci casnar appellant.

Apud Lucilium:

Quid tibi ego ambages Ambivi scribere coner?

Profectum a verbo ambe, quod inest in ambitu et ambitioso.

Apud Valerium Soranum:

Vetus adagio est, O Publi Scipio,

quod verbum usque eo evanuit, ut Graecum pro eo positum magis sit apertum: nam idem est quod paroimian vocant Graeci, ut est:

Auribus lupum teneo;

Canis caninam non est.

Adagio est littera commutata ambagio, dicta ab eo quod ambit orationem, neque in aliqua una re consistit sola. Ambagio dicta ut ambustum, quod circum ustum est, ut ambegna bos apud augures, quam circum aliae hostiae

constituuntur.

Cum tria sint coniuncta in origine verborum quae sint animadvertenda, a quo sit impositum et in quo et quid, saepe non minus de tertio quam de primo dubitatur, ut in hoc, utrum primum una canis aut canes sit appellata: dicta enim apud veteres una canes. Itaque Ennius scribit:

Tantidem quasi feta canes sine dentibus latrat.

Lucilius:

Nequam et magnus homo, laniorum immanis canes ut.

Impositio unius debuit esse canis, plurium canes; sed neque Ennius consuetudinem illam sequens reprehendendus, nec is qui nunc dicit:

Canis caninam non est.

Sed canes quod latratu signum dant, ut signa canunt, canes appellatae, et quod ea voce indicant noctu quae latent, latratus appellatus.

Sic dictum a quibusdam ut una canes, una trabes:

Trabes remis rostrata per altum.

Ennius:

Utinam ne in nemore Pelio securibus

Caesa accidisset abiegna ad terram trabes,

cuius verbi singularis casus rectus correptus ac facta trabs.

In Medo:

Caelitum camilla, expectata advenis: salve, hospita.

Camillam qui glossemata interpretati dixerunt administram; addi oportet, in his quae occultiora: itaque dicitur nuptiis camillus qui cumerum fert, in quo quid sit, in ministerio plerique extrinsecus nesciunt. Hinc Casmilus nominatur Samothreces mysteriis diis quidam amminister diis magnis. Verbum esse Graecum arbitror, quod apud Callimachum in poematibus eius inveni.

Apud Ennium:

Subulo quondam marinas propter astabat plagas.

Subulo dictus, quod ita dicunt tibicines Tusci: quocirca radices eius in Etruria, non Latio quaerundae.

Versibus quos olim Fauni vatesque canebant.

Fauni dei Latinorum, ita ut et Faunus et Fauna sit; hos versibus quos vocant Saturnios in silvestribus locis traditum est solitos fari futura, a quo fando Faunos dictos. Antiqui poetas vates appellabant a versibus viendis, ut de poematis cum scribam ostendam.

Corpore Tartarino prognata Paluda virago.

Tartarino dictum a Tartaro. Plato in IIII de fluminibus apud inferos quae sint in his unum Tartarum appellat: quare Tartari origo Graeca. Paluda a paludamentis. Haec insignia atque ornamenta militaria: ideo ad bellum cum exit imperator ac lictores mutarunt vestem et signa incinuerunt, paludatus dicitur proficisci; quae propter quod conspiciuntur qui ea habent ac fiunt palam, paludamenta dicta.

Plautus:

Epeum fumificum, qui legioni nostrae habet
Coctum cibum.

Epeum fumificum cocum, ab Epeo illo qui dicitur ad Troiam fecisse
Equum Troianum et Argivis cibum curasse.

Apud Naevium:

Atque prius pariet lucusta Lucam bovem.

Luca bos elephans; cur ita sit dicta, duobus modis inveni scriptum. Nam et
in Cornelii Commentario erat ab Libycis Lucas, et in Vergilii, ab Lucanis
Lucas; ab eo quod nostri, cum maximam quadripedem quam ipsi haberent
vocarent bovem et in Lucanis Pyrrhi bello primum vidissent apud hostis
elephantos, id est item quadripedes cornutas (nam quos dentes multi dicunt
sunt cornua), Lucanam bovem quod putabant, Lucam bovem appellarent.

Si ab Libya dictae essent Lucae, fortasse an pantherae quoque et leones
non Africae bestiae dicerentur, sed Lucae; neque ursi potius Lucani quam
Luci. Quare ego arbitror potius Lucas ab luce, quod longe relucebant propter
inauratas regios clupeos, quibus eorum tum ornatae erant turres.

Apud Ennium:

Orator sine pace redit regique refert rem.

Orator dictus ab oratione: qui enim verba haberet publice adversus eum
quo legabatur, ab oratione orator dictus; cum res maior erat actioni, legebantur
potissimum qui causam commodissime orare poterant. Itaque Ennius ait:

Oratores doctiloqui.

Apud Ennium:

Olli respondit suavis sonus Egeriai.

Olli valet dictum illi ab olla et ollo, quod alterum comitiis cum recitatur a
praecone dicitur olla centuria, non illa; alterum apparet in funeribus indictivis,
quo dicitur

Ollus leto datus est,

quod Graecus dicit lethei, id est oblivioni.

Apud Ennium:

Mensas constituit idemque ancilia primus.

Ancilia dicta ab ambecisu, quod ea arma ab utraque parte ut Thracum
incisa.

Libaque, fectores, Argeos et tutulatos.

Liba, quod libandi causa fiunt. Fectores dicti a fingendis libis. Argei ab
Argis; Argei fiunt e scirpeis, simulacra hominum XXVII; ea quotannis de
Ponte Sublicio a sacerdotibus publice deici solent in Tiberim. Tutulati dicti hi,
qui in sacris in capitibus habere solent ut metam; id tutulus appellatus ab eo
quod matres familias crines convolutos ad verticem capitis quos habent vitta
velatos, dicebantur tutuli, sive ab eo quod id tuendi causa capilli fiebat, sive
ab eo quod altissimum in urbe quod est, Arcs, tutissimum vocatur.

Eundem Pompilium ait fecisse flamines, qui cum omnes sunt a singulis
deis cognominati, in quibusdam apparent etyma, ut cur sit Martialis et

Quirinalis; sunt in quibus flaminum cognominibus latent origines, ut in his qui sunt versibus plerique:

Volturnalem, Palatuaalem, Furinalem,
Floralemque Falacrem et Pomonalem fecit
Hic idem,

quae obscura sunt; eorum origo Volturnus, diva Palatua, Furrina, Flora,
Falacer pater, Pomona.

Apud Ennium:

Iam cata signa ferae sonitum dare voce parabant.

Cata acuta: hoc enim verbo dicunt Sabini: quare

Catus Aelius Sextus

non, ut aiunt, sapiens, sed acutus, et quod est:

Tunc coepit memorare simul cata dicta,

accipienda acuta dicta.

Apud Lucilium:

Quid est? Thynno capto cobium excludunt foras,

et

Occidunt, Lupe, saperdae te et iura siluri

et

Sumere te atque amian.

Piscium nomina sunt eorumque in Graecia origo.

Apud Ennium:

Quae cava corpore caeruleo cortina receptat.

Cava cortina dicta, quod est inter terram et caelum ad similitudinem
cortinae Apollinis; ea a corde, quod inde sortes primae existimatae.

Apud Ennium:

Quin inde invitis sumpserunt perduellibus.

Perduelles dicuntur hostes; ut perfecit, sic perduellis, a per et duellum: id
postea bellum. Ab eadem causa facta Duellona Bellona.

Apud Plautum:

Neque Iugula, neque Vesperugo, neque Vergiliae occidunt.

Iugula signum, quod Accius appellat Oriona, cum ait:

Citius Orion patefit.

Huius signi caput dicitur ex tribus stellis, quas infra duae clarae, quas
appellant Umeros; inter quas quod videtur iugulum, Iugula dicta. Vesperugo
stella quae vespere oritur, a quo eam Opillus scribit Vesperum itaque dicitur
alterum:

Vesper adest,

quem Graeci dicunt divum hesperion.

Naevius:

Patrem suum supremum optimum appellat.

Supremum ab superrumo dictum: itaque Duodecim Tabulae, dicunt:

Solis occasu diei suprema tempestas esto.

Libri Augurum pro tempestate tempestutem dicunt supremum augurii tempus.

In Cornicularia:

Qui regi latrocinatus decem annos Demetrio.

Latrones dicti ab latere, qui circum latera erant regi atque ad latera habebant ferrum, quos postea a stipatione stipatores appellarunt, et qui conducebantur: ea enim merces Graece dicitur latron. Ab eo veteres poetae nonnunquam milites appellant latrones. At nunc viarum obsessores dicuntur latrones, quod item ut milites sunt cum ferro, aut quod latent ad insidias faciendas.

Apud Naevium:

Risi egomet mecum cassabundum ire ebrium.

Cassabundum a cadendo. Idem:

Diabathra in pedibus habebat, erat amictus epicroco.

Utrumque vocabulum Graecum.

In Menaechmis:

Inter ancillas sedere iubeas, lanam carere.

Idem hoc est verbum in Cemetria Naevii. Carere a carendo, quod eam tum purgant ac deducunt, ut careat spurcitia; ex quo carminari dicitur tum lana, cum ex ea carunt quod in ea haeret neque est lana, quae in Romulo Naevius appellat asta ab Oscis.

In Persa:

Iam pol ille hic aderit, credo, congerro meus.

Congerro a gerra; hoc Graecum est et in Latina cratis.

In Menaechmis:

Idem istuc aliis ascriptivis fieri ad legionem solet.

Ascriptivi dicti, quod olim ascribebantur inermes armatis militibus qui succederent, si quis eorum deperisset.

In Trinummo:

Nam illum tibi

Ferentarium esse amicum inventum intellego.

Ferentarium a ferendo id quod non est inane ac sine fructu; aut quod ferentarii equites hi dicti qui ea modo habebant arma quae ferrentur, ut iaculum. Huiuscemodi equites pictos vidi in Aesculapii aede vetere et ferentarios ascriptos.

In Frivolaria:

Ubi rorarii estis? En sunt. Ubi sunt accensi?

Ecce sunt.

Rorarii, dicti ab rore qui bellum committebant, ideo quod ante rorat quam pluit. Accensos ministratores Cato esse scribit; potest id ab censione, id est ab arbitrio: nam idem ad arbitrium eius cuius minister.

Pacuvius:

Cum deum triportenta * * *

In Mercatore:

Non tibi istuc magis dividiaest quam mihi hodie fuit.

(Eadem vi hoc est in Corollaria Naevis usus.) Dividia ab dividendo dicta, quod divisio distractio est doloris: itaque idem in Curculione ait:

Sed quid tibi est? — Lien enecat, renes dolent,
Pulmones distrahuntur.

In Pagone:

Honos syncerasto periit, pernis, glandio.

Syncerastum est omne edulium antiquo vocabulo Graeco.

In Parasito Pigro:

Domum ire coepi tramite in dextra via.

Trames a transverso dictus.

In Fugitivis:

Age ergo specta, vide vibices quantas. — Iam
inspexi. Quid est?

Vibices alte excitatum verberibus corpus.

In Cistellaria:

Non quasi nunc haec sunt hic limaces, lividae.

Limax ab limo, quod ibi vivit.

Diobolares, schoenicolae, miraculae.

Diobolares a binis obolis. Schoenicolae ab schoeno, nugatorio unguento.
Miraculae a miris, id est monstris; a quo Accius ait:

Personas distortis oribus deformis miriones.

Ibidem:

Scratiae, scrupipediae, strittabillae, tantulae.

Ab excreando scratiae siccas significat. Scrupipedam Aurelius scribit ab
scauripedao; Iuventus comicus dicebat a vermiculo piloso, qui solet esse in
fronde cum multis pedibus; Valerius a pede ac scrupaea. Ex eo Acci positum
curiose: itaque est in Melanippo:

Reicis abs te religionem? Scrupeam imponas tibi.

Strittabillas a strettillando; strittare ab eo qui sistit aegre.

In Astraba:

Acsitiosae annonam caram e vili concinnant viris.

Ideo in Sitellitergo idem ait:

Mulier est uxorcula;
Ut ego novi, scio acsitiosa quam siet.

Claudius scribit axitiosas demonstrari consupplicatrices. Ab agendo

axitiosas: ut ab una faciendo factiosae, sic ab una agendo axitiosae, ut actiosae, dictae.

In Cesistione:

Dis sribula aut de lumbo obscena viscera.

Stribula, ut Opillus, scribit, circum coxendices, sunt bovis; id Graecum est ab eius loci versura.

In Nervolaria:

Scobina ego illunc actutum adrasi senem.

Scobinam a scobe: lima enim materiae fabrilis est.

In Poenulo:

Vinceretis cervum cursu vel grillatorem gradu.

Grallator a gradu magno dictus.

In Truculento:

Sine virtute argutum civem mihi habeam pro praefica.

Praefica dicta, ut Aurelius scribit, mulier ab luco quae conduceretur quae ante domum mortui laudis eius caneret. Hoc factitatum Aristoteles scribit in libro qui inscribitur Nomima barbarika, quibus testimonium est, quod in Freto est Naevii:

Haec quidem hercle, opinor, praefica est: nam mortuum collaudat.

Claudius scribit:

Quae praeficeretur ancillis, quemadmodum lamentarentur, praefica est dicta.

Utrumque ostendit a praefectione praeficam dictam.

Apud Ennium:

Decem Coclites quas montibus summis
Ripaeis fodere.

Ab oculo cocles, ut ocles, dictus, qui unum haberet oculum: quocirca in Curculione est:

De Coclitum prosapia te esse arbitror:
Nam hi sunt unoculi.

IV.

Nunc de temporibus dicam. Quod est apud Cassium:

Nocte intempesta nostram devenit domum,

intempesta nox dicta ab tempestate, tempestas ab tempore; nox intempesta, quo tempore nihil agitur.

Quid noctis videtur? — in altisono
Caeli clipeo temo superat
Stellas sublimen agens etiam
Atque etiam noctis iter.

Hic multam noctem ostendere volt a temonis motu; sed temo unde et cur dicatur latet. Arbitror antiquos rusticos primum notasse quaedam in caelo signa, quae praeter alia erant insignia atque ad aliquem usum, ut culturae tempus, designandum convenire animadvertebantur.

Eius signa sunt, quod has septem stellas Graeci ut Homerus vocant hamaxan, et propinquum eius signum booten, nostri eas septem stellas triones et temonem et prope eas axem: triones enim et boves appellantur a bubulcis etiam nunc, maxime cum arant terram; e quis ut dicti

Valentes glebarii,

qui facile proscindunt glebas, sic omnes qui terram arabant a terra terriones, unde triones ut dicerentur E detrito.

Temo dictus a tenendo: is enim continet iugum et plastrum, appellatum a parte totum, ut multa. Possunt triones dicti, VII quod ita sitae stellae, ut ternae trigona faciant.

Aliquod lumen — iubarne? — in caelo cerno.

Iubar dicitur stella Lucifer, quae in summo quod habet lumen diffusum, ut leo in capite iubam. Huius ortus significat circiter esse extremam noctem. Itaque ait Pacuius:

Exorto iubare, noctis decurso itinere.

Apud Plautum in Parasito Pigno:

Inde hic bene potus, primulo crepusculo.

Crepusculum ab Sabinis, et id dubium tempus noctis an diei sit. Itaque in Condalio est:

Tam crepusculo, ferae ut amant, lampades accendite.

Ideo dubiae res creperae dictae.

In Trinummo:

Concubium sit noctis priusquam ad postremum perveneris.

Concubium a concubitu dormiendi causa dictum.

In Asinaria:

Videbitur, factum volo: redito conticinio.

Putem a conticiscendo conticinium sive, ut Opillus scribit, ab eo cum conticuerunt homines.

V.

Nunc de his rebus quae assignificant aliquod tempus, cum dicuntur aut fiunt, dicam.

Apud Accium:

Reciproca tendens nervo equino concita

Tela.

Reciproca est cum unde quid profectum redit eo; ab recipere recipere fectum, aut quod poscere procare dictum.

Apud Plautum:

Ut transversus, non proversus cedit quasi cancer solet.

Proversus dicitur ab eo qui in id quod est ante, est versus, et ideo qui exit in vestibulum, quod est ante domum, prodire et procedere; quod cum leno non faceret, sed secundum parietem transversus iret, dixit “ut transversus cedit quasi cancer, non proversus ut homo.”

Apud Ennium:

Andromachae nomen qui indidit, recte indidit.

Item:

Quapropter Parim pastores nunc Alexandrum vocant.

Imitari dum voluit, Euripiden et ponere etymon, est lapsus; nam Euripides quod Graeca posuit, etyma sunt aperta. Ille ait ideo nomen additum Andromachae, quod andri machetai: hoc Ennium, quis potest intellegere in versu significare

Andromachae nomen qui indidit, recte indidit,

aut Alexandrum ab eo appellatum in Graecia qui Paris fuisset, a quo Herculem quoque cognominatum alexikakon, ab eo quod defensor esset hominum?

Apud Accium:

Iamque Auroram rutilare procul

Cerno.

Aurora dicitur ante solis ortum, ab eo quod ab igni solis tum aureo aer aurescit. Quod addit rutilare, est ab eodem colore: aurei enim rutili, et inde etiam mulieres valde rufae rutilae dictae.

Apud Terentium:

Scortatur, potat, olet unguenta de meo.

Scortari est saepius meretriculam ducere, quae dicta a pelle: id enim non solum antiqui dicebant scortum, sed etiam nunc dicimus scortea ea quae e corio ac pellibus sunt facta; in aliquot sacris ac sacellis scriptum habemus:

Ne quod scortum adhibeatur,

ideo ne morticinum quid adsit. In Atellanis licet animadvertere rusticos dicere se adduxisse pro scorto pelliculam.

Apud Accium:

Multis nomen

Vestrum numenque ciendo.

Numen dicunt esse imperium, dictum ab nutu, quod cuius nutu omnia sunt, eius imperium maximum esse videatur: itaque in Iove hoc et Homerus et

Accius aliquotiens.

Apud Plautum:

Nisi unum: epityrum estur insane bene.

Epityrum vocabulum est cibi, quo frequentius Sicilia quam Italia usa. Id vehementer cum vellet dicere edi, dixit insane, quod insani omnia faciunt vehementer.

Apud Pacuium:

Flexanima tamquam lymphata aut Bacchi sacris

Commota.

Lymphata dicta a lymphā; lymphā a Nymphā, ut quod apud Graecos Thetis, apud Ennium:

Thelis illi mater.

In Graecia commota mente quos nympholeptous, appellant, ab eo lymphatos dixerunt nostri. Bacchi, qui et Liber, cuius comites a Baccho Bacchae, et vinum in Hispania bacca.

Origo in his omnibus Graeca, ut quod apud Pacuium:

Alcyonis ritu litus pervolgans feror.

Haec enim avis nunc Graece dicitur halkyon, nostri alcedo; haec hieme quod pullos dicitur tranquillo mari facere, eos dies alcyonia appellant. Quod est in versu “alcyonis ritu,” id est eius instituto, ut cum haruspex praecipit, ut suo quique ritu sacrificium faciat, et nos dicimus XV viros Graeco ritu sacra, non Romano facere. Quod enim fit rite, id ratum ac rectum est; ab eo Accius

rite perfectis sacris

recte volt accipi.

Apud Ennium:

Si voles advortere animum, comiter monstrabitur.

Comiter hilare ac lubenter, cuius origo Graeca komos, inde comissatio Latine dicta et in Graecia, ut quidam scribunt, komoidia.

Apud Atilium:

Cape, caede, Lyde, come, condi.

Cape, unde accipe; sed hoc in proximo libro retractandum.

Apud Pacuium:

Nulla res

Neque cicurare neque mederi potis est neque rem

reficere.

Cicurare, mansuefacere: quod enim a fero discretum, id dicitur cicur, et ideo dictum

cicur ingenium optineo

mansuetum; a quo Veturii quoque nobiles cognominati Cicurini. Natum a cicco cicur videtur; ciccum dicebant membranam tenuem, quae est ut in malo Punico discrimen; a quo etiam Plautus dicit:

Quod volt demensum, ciccum non interduo.

Apud Naevium:

Circumveniri videor ferme iniuria.

Ferme dicitur quod nunc fere; utrumque dictum a ferendo, quod id quod fertur est in motu atque adventat.

Apud Plautum:

Euax, iurgio uxorem tandem abegi a ianua.

Euax verbum nihil significat, sed effutitum naturaliter est, ut apud Ennium:

Hahae,

Ipse clipeus cecidit;

apud Ennium:

Eu, mea puella, e spe quidem id successit, tibi;

apud Pompilium:

Heu, qua me causa, Fortuna, infeste premis?

Quod ait iurgio, id est litibus: itaque quibus res erat in controversia, ea vocabatur lis: ideo in actionibus videmus dici

quam rem sive litem dicere oportet.

Ex quo licet uidere iurgare esse ab iure dictum, cum quis iure litigaret; ab quo obiurgat is qui id facit iuste.

Apud Lucilium:

Atque aliquot sibi si ab rebus clepsere foro qui.

Clepsere dixit, unde etiam alii clepere, id est corripere, quorum origo a clam, ut sit dictum clapere, unde clepere E ex A commutato, ut multa. Potest vel a Graeco dictum kleptein clepere.

Apud Matium:

Corpora Graiorum maerebat, mandier igni.

Dictum mandier a mandendo, unde manducari, a quo et in Atellanis Dossenum vocant Manducum.

Apud Matium:

Obscaeni interpret funestique ominis auctor.

Obscaenum dictum ab scaena; eam, ut Graeci, et Accius scribit scenam. In pluribus verbis A ante E alii ponunt, alii non, ut quod partim dicunt scaeptrum, partim sceptrum, alii Plauti Faeneratricem, alii Feneratricem; sic faenisicia ac fenisicia, ac rustici pappum Mesium, non Maesium, a quo Lucilius scribit:

Cecilius pretor ne rusticus fiat.

Quare turpe ideo obscaenum, quod nisi in scaena, palam dici non debet.

Potest vel ab eo quod pueris turpicula res in collo quaedam suspenditur, ne quid obsit, bonae, scaevae causa scaevola appellata. Ea dicta ab scaeva, id est sinistra, quod quae sinistra sunt bona auspicia existimantur; a quo dicitur comitia aliudve quid, sicut dixi, scaeva fieri avi, sinistra quae nunc est. Id a Graeco est, quod hi sinistram vocant scaian; quare, quod dixi, obscaenum omen est omen turpe; quod unde id dicitur os, osmen, e quo S extritum.

Apud Plautum:

Quia ego antehac te amavi et mihi amicam esse
crevi.

Crevi valet constitui: itaque heres cum constituit se heredem esse, dicitur
cernere, et cum id fecit, crevisse.

Apud eundem quod est:

Mi frequentem operam dedistis,

valet assiduam: itaque qui adest assiduus fere et quom oportet, is frequens,
cui infrequens opponi solet. Itaque illud quod eadem mulierculae dicunt:

Pol isto quidem nos pretio facile

Optanti est frequentare:

Ita in prandio nos lepide ac nitide

Accepisti,

apparet dicere: facile est curare ut adsidue adsimus, cum tam bene nos
accipias.

Apud Ennium:

Decretum est stare atque fodari corpora telis.

Hoc verbum Ennii dictum a fodiendo, a quo fossa.

Apud Ennium:

Vocibus concide, fac si musset obrutum.

Mussare dictum, quod muti non amplius quam my dicunt; a quo idem dicit
id quod minimum est:

Neque, ut aiunt, my facere audent.

Apud Pacuium:

Di monerint meliora atque amentiam auerruncassint
tuam.

Ab avertendo averruncare, ut deus qui in eis rebus praeest Avertuncus.
Itaque ab eo precari solent, ut pericula avertat.

In Aulularia:

Pipulo te differam ante aedis,

id est convicio, declinatum a pipatu pullorum. Multa ab animalium vocibus
tralata in homines, partim quae sunt aperta, partim obscura; perspicua, ut
Ennii:

Animus cum pectore latrat.

Plauti:

Gannit odiosus omni totae familiae.

Caecilii:

Tantum rem dibalare ut pro nilo habuerit

Lucilii:

Haec, inquam, rudet ex rostris atque heulitabit.

Eiusdem:

Quantum hinnitum atque equitatum.

Minus aperta, ut Porcii ab lupo:

Volitare ululantis.

Ennii a vitulo:

Tibicina maximo labore mugit.

Eiusdem a bove:

Clamore bovantes.

Eiusdem a leone:

Pausam fecere fremendi.

Eiusdem ab haedo:

Clamor ad caelum volvendus per aethera vagit.

Suei a merula:

Frendit e fronde et fritinnit suaviter.

Macci in Casina, a fringuilla:

Quid fringuttis? Quid istuc tam cupide cupis?

Suei a volucris:

Ita tradet aequae in rem neque in
Iudicium Aesopi nec theatri tritiles.

In Colace:

Nexum * * *

Nexum Manilius scribit omne quod per libram et aes geritur, in quo sint mancipia; Mucius, quae per aes et libram fiant ut obligentur, praeter quom mancipio detur. Hoc verius esse ipsum verbum ostendit, de quo quaeritur: nam id aes quod obligatur per libram neque suum fit, inde nexum dictum. Liber qui suas operas in servitutem pro pecunia quam debebat nectebat, dum solveret, nexus vocatur, ut ab aere obaeratus. Hoc C. Poetelio Libone Visolo dictatore sublatum ne fieret, et omnes qui Bonam Copiam iurarunt, ne essent nexi dissoluti.

In Casina:

Sine amet, sine quod lubet id faciat,
Quando tibi domi nihil delictum est.

Dictum ab eo, quod ad delinquendum non sunt, ut turbida quae sunt deliquantur, ut liquida fiant. Aurelius scribit delictum esse ab liquido: Claudius ab eliquato. Si quis alterutrum sequi malet, habebit auctorem.

Apud Atilium:

Per laetitiam liquitur
Animus.

VI.

Multa apud poetas reliqua esse verba quorum origines possint dici, non dubito, ut apud Naevium in Aesiona mucro gladii “lingula” a lingua; in Clastidio “vitulantes” a Vitula; in Dolo “caperrata fronte” a caprae fronte; in Demetrio “persibus” a perite: itaque sub hoc glossema “callide” subscribunt; in Lampadione “protinam” a protinus, continuitatem significans; in Nagidone “clucidatus” suavis, tametsi a magistris accepimus mansuetum; in Romulo “consponsus” contra sponsum rogatus; in Stigmatia “praebia” a praebendo, ut sit tutus, quod sint remedia in collo pueris; in Technico “confictant” a conficto convenire dictum;

In Tarentilla “praelucidum” a luce, illustre; in Tunicularia:

ecbolicas aulas quassant

quae eiciuntur, a Graeco verbo ekbole dictum; in Bello Punico:

nec satis sardare

ab serare dictum, id est aperire; hinc etiam sera, qua remota fores panduntur.

VII.

Sed quod vereor ne plures sint futuri qui de hoc genere me quod nimium multa scripserim reprehendant quam quod reliquerim quaedam accusent, ideo potius iam reprimendum quam procudendum puto esse volumen: nemo reprehensus qui e segete ad spicilegium reliquit stipulam. Quare institutis sex libris, quemadmodum rebus Latina nomina essent imposita ad usum nostrum:

e quis tris scripsi Po. Septumio qui mihi fuit quaestor, tris tibi, quorum hic est tertius, priores de disciplina verborum originis, posteriores de verborum originibus. In illis, qui ante sunt, in primo volumine est quae dicantur, cur etymologike neque ars sit neque ea utilis sit, in secundo quae sint, cur et ars ea sit et utilis sit, in tertio quae forma etymologiae.

In secundis tribus quos ad te misi item generatim discretis, primum in quo sunt origines verborum locorum et earum rerum quae in locis esse solent, secundum quibus vocabulis tempora sint notata et eae res quae in temporibus fiunt, tertius hic, in quo a poetis item sumpta ut illa quae dixi in duobus libris soluta oratione. Quocirca quoniam omnis operis de Lingua Latina tris feci partis, primo quemadmodum vocabula imposita essent rebus, secundo quemadmodum ea in casus declinarentur, tertio quemadmodum coniungerentur, prima parte perpetrata, ut secundam ordiri possim, huic libro faciam finem.

LIBER VIII

Quae Dicantur Cur Non Sit Analogia

I.

Quom oratio natura tripartita esset, ut superioribus libris ostendi cuius prima pars, quemadmodum vocabula rebus essent imposita, secunda, quo pacto de his declinata in discrimina ierint, tertia, ut ea inter se ratione coniuncta sententiam efferant, prima parte exposita de secunda incipiam hinc. Ut propago omnis natura secunda, quod prius illud rectum, unde ea, sic declinata: itaque declinatur in verbis: rectum homo, obliquum hominis, quod declinatum a recto.

De huiusmodi, multiplici natura discriminum causae sunt hae, cur et quo et quemadmodum in loquendo declinata sunt verba. De quibus duo prima duabus causis percurram breviter, quod et tum, cum de copia verborum scribam, erit retractandum et quod de tribus tertium quod est habet suas permultas ac magnas partes.

II.

Declinatio inducta in sermones non solum Latinos, sed omnium hominum utili et necessaria de causa: nisi enim ita esset factum, neque discere tantum numerum verborum possemus (infinite enim sunt naturae in quas ea declinantur) neque quae didicissemus ex his, quae inter se rerum cognatio esset, appareret. At nunc ideo videmus, quod simile est, quod propagatum: legi cum de lego, declinatum est, duo simul apparent, quodam modo eadem dici et non eodem tempore factum; at si verbi gratia alterum horum diceretur Priamus, alterum Hecuba, nullam unitatem adsignificaret, quae apparet in lego et legi et in Priamus Priamo.

Ut in hominibus quaedam sunt agnationes ac gentilitates, sic in verbis: ut enim ab Aemilio homines orti Aemilii ac gentiles, sic ab Aemilii nomine declinatae voces in gentilitate nominali: ab eo enim, quod est impositum recto casu Aemilius, orta Aemilii, Aemilium, Aemilios, Aemiliorum et sic reliquae eiusdem quae sunt stirpis.

Duo igitur omnino verborum principia, impositio et declinatio, alterum ut fons, alterum ut rivus. Impositicia nomina esse voluerunt quam paucissima, quo citius ediscere possent, declinata quam plurima, quo facilius omnes quibus ad usum opus esset dicerent.

Ad illud genus, quod prius, historia opus est: nisi discendo, enim aliter id non pervenit ad nos; ad reliquum genus, quod posterius, ars: ad quam opus est paucis praeceptis quae sunt brevia. Qua enim ratione in uno vocabulo declinare didiceris, in infinito numero nominum uti possis: itaque novis nominibus allatis in consuetudinem sine dubitatione eorum declinatus statim

omnis dicit populus; etiam novicii servi empti in magna familia cito omnium conservorum nomina recto casu accepto in reliquos obliquos declinant.

Qui si non numquam offendunt, non est mirum: et enim illi qui primi nomina imposuerunt rebus fortasse an in quibusdam sint lapsi: voluisse enim putantur singularis res notare, ut ex his in multitudinem declinaretur, ab homine homines; sic mares liberos voluisse notari, ut ex his feminae declinarentur, ut est ab Terentio Terentia; sic in recto casu quas imponent voces, ut illinc essent futurae quo declinarentur: sed haec in omnibus tenere nequisse, quod et unae et binae dicuntur scopae, et mas et femina aquila, et recto et obliquo vocabulo vis.

Cur haec non tam sint in culpa quam putant, pleraque solvere non difficile, sed nunc non necesse: non enim qui potuerint adsequi sed qui voluerint, ad hoc quod propositum refert, quod nihilo minus, declinari potest ab eo quod imposuerunt, scopae scoparum, quam si imposuissent scopa, ab eo scopae, sic alia.

III.

Causa, inquam, cur eas ab impositis nominibus declinarint, quam ostendi; sequitur, in quas voluerint, declinari aut noluerint, ut generatim ac summatim item informem. Duo enim genera verborum, unum fecundum, quod declinando multas ex se parit disparilis formas, ut est lego legi legam, sic alia, alterum genus sterile, quod ex se parit nihil, ut est et iam vix cras magis cur.

Quarum rerum usus erat simplex, simplex ibi etiam vocabuli declinatus, ut in qua domo unus servus, uno servili opust nomine, in qua multi, pluribus. Igitur et in his rebus quae sunt nomina, quod discrimina vocis plura, propagines plures, et in his rebus quae copulae sunt ac iungunt verba, quod non opus fuit declinari in plura, fere singula sunt: uno enim loro alligare possis vel hominem vel equum vel aliud quod, quicquid est quod cum altero potest colligari. Sic quod dicimus in loquendo “Consul fuit Tullius et Antonius,” eodem illo “et” omnis binos consules colligare, possumus, vel dicam amplius, omnia nomina, atque adeo etiam omnia verba, cum fulmentum ex una syllaba illud “et” maneat unum. Quare duce natura factumst, quae imposita essent vocabula rebus, ne ab omnibus his declinatus putaremus.

IV.

Quorum generum declinationes oriantur, partes orationis sunt duae, nisi item ut Dion in tris diviserimus partes res quae verbis significantur: unam quae adsignificat casus, alteram quae tempora, tertiam quae neutrum. De his Aristoteles orationis duas partes esse dicit: vocabula et verba, ut homo et equus, et legit et currit.

Utriusque generis, et vocabuli et verbi, quaedam priora, quaedam posteriora; priora ut homo, scribit, posteriora ut doctus et docte: dicitur enim

homo doctus et scribit docte. Haec sequitur locus et tempus, quod neque homo nec scribit potest sine loco et tempore esse, ita ut magis sit locus homini coniunctus, tempus scriptioni.

Cum de his nomen sit primum (prius enim nomen est quam verbum temporale et reliqua posterius quam nomen et verbum), prima igitur nomina: quare de eorum declinatione quam de verborum ante dicam.

V.

Nomina declinantur aut in earum rerum discrimina, quarum nomina sunt, ut ab Terentius Terentia, aut in eas res extrinsecus, quarum ea nomina non sunt, ut ab equo equiso. In sua discrimina declinantur aut propter ipsius rei naturam de qua dicitur aut propter illius usum qui dicit. Propter ipsius rei discrimina, aut ab toto aut a parte. Quae a toto, declinata sunt aut propter multitudinem aut propter exiguitatem. Propter exiguitatem, ut ab homine homunculus, ab capite capitulum; propter multitudinem, ut ab homine homines; ab eo ab eo quod alii dicunt cervices et id Hortensius in poematis cervix.

Quae a parte declinata, aut a corpore, ut a mamma mammosae, a manu manubria, aut ab animo, ut a prudentia prudentes, ab ingenio ingeniosi. Haec sine agitationibus; at ubi motus maiores, item ab animo aut a corpore, ut ab strenuitate et nobilitate strenui et nobiles, sic a pugnando et currendo pugiles et cursores. Ut aliae declinationes ab animo, aliae a corpore, sic aliae quae extra hominem, ut pecuniosi, agrarii, quod foris pecunia et ager.

VI.

Propter eorum qui dicunt usum declinati casus, uti is qui de altero diceret, distinguere posset, cum vocaret, cum daret, cum accusaret, sic alia eiusdem modi discrimina, quae nos et Graecos ad declinandum duxerunt. Sine controversia sunt obliqui, qui nascuntur a recto: unde rectus an sit casus sunt qui quaerant. Nos vero sex habemus, Graeci quinque: quis vocetur, ut Hercules; quemadmodum vocetur, ut Hercule; quo vocetur, ut ad Herculem; a quo vocetur, ut ab Hercule; cui vocetur, ut Herculi; cuius vocetur, ut Herculis.

VII.

Propter ea verba quae erant proinde ac cognomina, ut prudens, candidus, strenuus, quod in his praeterea sunt discrimina propter incrementum, quod maius aut minus in his esse potest, accessit declinationum genus, ut a candido candidius candidissimum sic a longo, divite, id genus aliis ut fieret.

Quae in eas res quae extrinsecus declinantur, sunt ab equo equile, ab ovibus ovile, sic alia: haec contraria illis quae supra dicta, ut a pecunia pecuniosus, ab urbe urbanus, ab atro atratus: ut nonnunquam ab homine locus, ab eo loco homo, ut ab Romulo Roma, ab Roma Romanus.

Aliquot modis declinata ea quae foris: nam aliter qui a maioribus suis,

Latonijs et Priamidae, aliter quae a facto, ut a praedando praeda, a merendo merces; sic alia sunt, quae circum ire non difficile; sed quod genus iam videtur et alia urgent, omitto.

VIII.

In verborum genere quae tempora adsignificant, quod ea erant tria, praeteritum, praesens, futurum, declinatio facienda fuit triplex, ut ab saluto salutabam, salutabo; cum item personarum natura triplex esset, qui loqueretur, ad quem, de quo, haec ab eodem verbo declinata, quae in copia verborum explicabuntur.

IX.

Quoniam dictum de duobus, declinatio cur et in quas sit facta, tertium quod relinquitur, quemadmodum, nunc dicetur. Declinationum genera sunt duo, voluntarium et naturale; voluntarium est, quo ut cuiusque tulit voluntas declinavit. Sic tres cum emerunt Ephesi singulos servos, nonnunquam alius declinat nomen ab eo qui vendit Artemidorus, atque Artemam appellat, alius a regione quod ibi emit, ab Ionia Iona, alius quod Ephesi Ephesium, sic alius ab alia aliqua re, ut visum est.

Contra naturalem declinationem dico, quae non a singulorum oritur voluntate, sed a communi consensu. Itaque omnes impositis nominibus eorum item declinant casus atque eodem modo dicunt huius Artemidori et huius Ionis et huius Ephesi, sic in casibus aliis.

Cum utrumque nonnunquam accadat, et ut in voluntaria declinatione animadvertatur natura et in naturali voluntas, quae, cuiusmodi sint, aperientur infra; quod utraque declinatione alia fiunt similia, alia dissimilia, de eo Graeci Latinique libros fecerunt multos, partim cum alii putarent in loquendo ea verba sequi oportere, quae ab similibus similiter essent declinata, quas appellarunt analogias, alii cum id neglegendum putarent ac potius sequendam dissimilitudinem, quae in consuetudine est, quam vocarunt anomaliam, cum, ut ego arbitror, utrumque sit nobis sequendum, quod in declinatione voluntaria sit anomalia, in naturali magis analogia.

De quibus utriusque generis declinationibus libros faciam bis ternos, prioris tris de earum declinationum disciplina, posteriores de eius disciplinae propaginibus. De prioribus primus erit hic, quae contra similitudinem declinationum dicantur, secundus, quae contra dissimilitudinem, tertius de similitudinum forma; de quibus quae expediero singulis tribus, tum de alteris totidem scribere ac dividere incipiam.

X.

Quod huiusce libri est dicere contra eos qui similitudinem sequuntur, quae est ut in aetate puer ad senem, puella ad anum, in verbis ut est scribo scribam,

dicam prius contra universam analogiam, dein tum de singulis partibus. A natura sermonis incipiam.

XI.

Omnis oratio cum debeat dirigi ad utilitatem, ad quam tum denique pervenit, si est aperta et brevis, quae petimus, quod obscurus et longior orator est odio; et cum efficiat aperta, ut intellegatur, brevis, ut cito intellegatur, et apertam consuetudo, brevem temperantia loquentis, et utrumque fieri possit sine analogia, nihil ea opus est. Neque enim, utrum Herculi an Herculis clavam dici oporteat, si doceat analogia, cum utrumque sit in consuetudine, non neglegendum, quod aequae sunt et brevitas et aperta.

XII.

Praeterea quoniam utilitatis causa quaecumque res sit inventa, si ex ea quis id sit consecutus, amplius eam scrutari cum sit nimium otiosi, et cum utilitatis causa verba ideo sint imposita rebus ut eas significant, si id consequimur una consuetudine, nihil prodest analogia.

XIII.

Accedit quod quaecumque usus causa ad vitam sint assumpta, in his nostrum est utilitatem quaerere, non similitudinem: itaque in vestitu cum dissimillima sit virilis toga tunicae, muliebris stola pallio, tamen inaequabilitatem hanc sequimur nihilo minus.

XIV.

In aedificiis, quomodo non videamus habere ad atrium peristylum similitudinem et cubiculum ad equile, tamen propter utilitatem in his dissimilitudines potius quam similitudines sequimur: itaque et hiberna triclinia et aestiva non item valvata ac fenestrata facimus.

XV.

Quare cum, ut in vestitu aedificiis, sic in supellectile cibo ceterisque omnibus quae usus causa ad vitam sunt assumpta dominetur inaequabilitas, in sermone quoque, qui est usus causa constitutus, ea non repudianda.

XVI.

Quod si quis duplicem putat esse summam, ad quas metas naturae sit perveniendum in usu, utilitatis et elegantiae, quod non solum vestiti esse volumus ut vitemus frigus, sed etiam ut videamur vestiti esse honeste, non domum habere ut simus in tecto et tuto solum, quo necessitas contruserit, sed etiam ubi voluptas retineri possit, non solum vasa ad victum habilia, sed etiam

figura bella atque ab artifice ficta, quod aliud homini, aliud humanitati satis est; quodvis sitienti homini poculum idoneum, humanitati nisi bellum parum; sed cum discessum est ab utilitate ad voluptatem, tamen in eo ex dissimilitudine plus voluptatis quam ex similitudine saepe capitur.

Quo nomine et gemina conclavia dissimiliter poliunt et lectos non omnis parvis magnitudine ac figura faciunt. Quod si esset analogia petenda suppellectili, omnis lectos haberemus domi ad unam formam et aut cum fulcro aut sine eo, nec cum ad tricliniarem gradum, non item ad cubicularem; neque potius delectaremur suppellectile distincta quae esset ex ebore aliisque rebus disparibus figuris quam grabatis, qui ana logon, ad similem formam plerumque eadem materia fiunt. Quare aut negandum nobis disparia esse iucunda aut, quoniam necesse est confiteri, dicendum verborum dissimilitudinem, quae sit in consuetudine, non esse vitandam.

XVII.

Quod si analogia sequenda est nobis, aut ea observanda est quae est in consuetudine aut quae non est. Si ea quae est sequenda est, praeceptis nihil opus est, quod, cum consuetudinem sequemur, ea nos sequetur; si quae non est in consuetudine, quaeremus: ut quisque duo verba in quattuor formis finxerit similiter, quamvis haec nolemus, tamen erunt sequenda, ut Iuppitri, Marspitrem? Quas si quis servet analogias, pro insano sit reprehendendus. Non ergo ea est sequenda.

XVIII.

Quod si oportet id esse, ut a similibus similiter omnia declinentur verba, sequitur, ut ab dissimilibus, dissimilia debeant fingi, quod non fit: nam et ab similibus alia fiunt similia, alia dissimilia, et ab dissimilibus partim similia partim dissimilia. Ab similibus similia, ut a bono et malo bonum malum; ab similibus dissimilia, ut ab lupus lepus lupo lepori. Contra ab dissimilibus dissimilia, ut Priamus Paris, Priamo Pari: ab dissimilibus similia, ut Iupiter ovis, Iovi ovi.

Eo iam magis analogias esse negandum, quod non modo ab similibus dissimilia finguntur, sed etiam ab isdem vocabulis dissimilia neque a dissimilibus similia, sed etiam eadem. Ab isdem vocabulis dissimilia fingi apparet, quod, cum duae sint Albae, ab una dicuntur Albani, ab altera Albenses; cum trinae fuerint Athenae, ab una dicti Athenaei, ab altera Athenaii, a tertia Athenaeopolitae.

Sic ex diversis verbis multa facta in declinando inveniuntur eadem, ut cum dico ab Saturni Lua Luam, et ab solvendo luo luam. Omnia fere nostra nomina virilia et muliebria multitudinis cum recto casu fiunt dissimilia, eadem in dandi: dissimilia, ut mares Terentiei, feminae Terentiae, eadem in dandi, vireis Terentieis et mulieribus Terentieis. Dissimile Plautus et Plautius, Marcus et Marcius; et commune, ut huius Plauti et Marci.

Denique si est analogia, quod in multis verbis est similitudo verborum, sequitur, quod in pluribus est dissimilitudo, ut non sit in sermone sequenda analogia.

XX.

Postremo, si est in oratione, aut in omnibus eius partibus est aut in aliqua: at in omnibus non est, in aliqua esse parum est, ut album esse Aethiopa non satis est quod habet candidos dentes: non est ergo analogia.

XXI.

Cum ab similibus verbis quae declinantur similia fore polliceantur qui analogias esse dicunt, et cum simile tum, denique dicant esse verbo verbum, ex eodem si genere eadem figura transitum de cassu in cassum similiter ostendi possit, qui haec dicunt utrumque ignorant, et in quo loco similitudo debeat esse, et quemadmodum spectari soleat, simile sit necne. Quae cum ignorant, sequitur ut, cum de analogia dicere non possint, sequi non debeamus.

Quaero enim, verbum utrum dicant vocem quae ex syllabis est ficta, eam quam audimus, an quod ea significat, quam intellegimus, an utrumque. Si vox voci esse debet similis, nihil refert, quod significat mas an femina sit, et utrum nomen an vocabulum sit, quod illi interesse dicunt.

Sin illud quod significatur debet esse simile, Diona et Theona quos dicunt esse paene ipsi geminos, inveniuntur esse dissimiles, si alter erit puer, alter senex, aut unus albus et alter Aethiops, item aliqua re alia dissimiles. Sin ex utraque parte debet verbum esse simile, non cito inveniatur quin in altera utra re claudicet, nec Perpenna et Alfena erit simile, quod alterum nomen virum, alterum mulierem significat. Quare quoniam ubi similitudo esse debeat nequeunt ostendere, impudentes sunt qui dicunt esse analogias.

XXII.

Alterum illud quod dixi, quemadmodum simile spectari oporteret, ignorare apparet ex eorum praecepto, quod dicunt, cum transierit e nominandi casibus in eos quos appellant vocandi, tum denique posse dici rectos esse similis aut dissimilis: esset enim ut si quis, Menaechmos, geminos cum videat, dicat non posse iudicare similesne sint, nisi qui ex his sint nati considerarit num discrepent inter se.

Nihil, inquam, quo magis minusve sit simile quod conferas cum altero, ad iudicandum extrinsecus oportet sumi. Quare cum ignorent, quemadmodum similitudo debeat sumi, de analogia dicere non possunt. Haec apertius dixissem, nisi brevius eo nunc mallem, quod infra sunt planius usurpanda.

Quare quod ad universam naturam verborum attinet, haec attigisse modo satis est.

XXIII.

Quod ad partis singulas orationis, deinceps dicam. Quoius quoniam sunt divisiones plures, nunc ponam potissimum eam qua dividitur oratio secundum naturam in quattuor partis: in eam quae habet casus et quae habet tempora et quae habet neutrum et in qua est utrumque. Has vocant quidam appellandi, dicendi, adminiculandi, iungendi. Appellandi dicitur ut homo et Nestor, dicendi ut scribo et lego, iungendi ut scribens et legens, adminiculandi ut docte et commode.

Appellandi partes sunt quattuor, e quis dicta a quibusdam provocabula quae sunt ut quis, quae; vocabula ut scutum, gladium; nomina ut Romulus, Remus; pronomina ut hic, haec. Duo media dicuntur nominatus; prima et extrema articuli. Primum genus est infinitum, secundum ut infinitum, tertium ut finitum, quartum finitum.

Haec singulatim triplicia esse debent quod ad sexum, multitudinem, casum: sexum, utrum virile an muliebre an neutrum sit, ut doctus docta doctum; multitudinem, unum an plura significet, ut hic hi, haec hae; casum, utrum recto sit ut Marcus, an obliquo ut Marco, an communi ut ovis.

XXIV.

His discretis partibus singulas perspice, quo facilius nusquam esse analogias quas sequi debeamus videas. Nempe esse oportebat vocis formas ternas, ut in hoc humanus humana humanum, sed habent quaedam binas, ut cervus cerva, quaedam singulas, ut aper, et sic multa. Non ergo est in huiuscemodi generibus analogia.

XXV.

Et in multitudine ut unum significat pater, plures patres, sic omnia debuerunt esse bina. Sed et singularia solum sunt multa, ut cicer, siser: nemo enim dicit cicera, sisera; et multitudinis sunt, ut salinae balneae: non enim ab his singulari specie dicitur salina et balnea. Neque ab eo quod dicunt balneum habet multitudinis consuetudo: nam quod est ut praedium balneum, debuerunt esse plura, ut praedia balnea, quod non est: non est ergo in his quoque analogia.

XXVI.

Alia casus habent et rectos et obliquos, alia rectos solum, alia modo obliquos habent: utrosque ut Iuno, Iunonis, rectos modo ut Iupiter, Maspiter, obliquos solum ut Iovis, Iovem: non ergo in his est analogia.

XXVII.

Nunc videamus in illa quadripertita. Primum si esset analogia in infiniteis articulis, ut est quis quoius, sic diceretur quae quaius; et ut est quis quoi, sic diceretur qua quae: nam est proportione simile: ut deae bonae quae, sic dea bona qua est; et ut est quem quis, sic quos ques. Quare quod nunc dicitur qui homines, dici oportuit ques.

XXVIII.

Praeterea ut est ab is, ei, sic ab ea eae diceretur, quod nunc dicitur ei, et pronuntiaretur ut in ieis viris, sic eais mulieribus; et ut est in rectis casibus is ea, in obliquis esset eius eaius; nunc non modo in virili sicut in muliebri dicitur eius, sed etiam in neutris articulis, ut eius viri, eius mulieris, eius pabuli, cum discriminentur in rectis casibus is ea id. De hoc genere parcius tetigi, quod librarios haec spinosiora indiligentius elaturos putavi.

XXIX.

De nominatibus qui accedunt proxime ad infinitam naturam articulorum atque appellantur vocabula, ut homo equus, eorum declinationum genera sunt quattuor: unum nominandi, ut ab equo equile, alterum casuale, ut ab equo equum, tertium augendi, ut ab albo albius, quartum minuendi, ut a cista cistula.

Primum genus, ut dixi, id est, cum ab aliqua parte orationis declinata sunt recto casu vocabula, ut a balneis balneator. Hoc fere triplices habet radices, quod et a vocabulo oritur, ut a venatore venabulum, et a nomine, ut a Tibure Tiburs, et a verbo, ut a currendo cursor. In nullo horum analogiam servari videbis.

XXX.

Primum cum dicatur ut ab ove et sue ovile et suile, sic a bove bovine non dicitur; et cum simile sit avis et ovis, neque dicitur ut ab ave aviarium ab ove ovarium, neque ut ab ove ovile ab ave avile; et cum debuerit esse ut a cubatione cubiculum sic a sessione sediculum, non est.

Quoniam taberna, ubi venit vinum, a vino vinaria, a creta cretaria, ab unguento unguentaria dicitur, ana logon si essent vocabula, ubi caro venit, carnaria, ubi pelles, pelliaria, ubi calcei, calcearia diceretur, non laniena ac pellesuina et sutrina. Et sicut est ab uno uni, ab tribus trini, a quattuor quadriini, sic a duobus duini, non bini diceretur; nec non ut quadrigae trigae, sic potius duigae quam bigae. Permulta sunt huiusce generis, quae quoniam admonitus perspicere potest, omitto.

XXXI.

Vocabula quae ab nominibus oriuntur, si ab similibus nominibus similia esse debent, dicemus, quoniam gemina sunt Parma Roma, ut Parmenses sic Romenses; aut quoniam est similis Roma Nola Parma, dicemus ut Romani Nolani sic Parmani; et a Pergamo, ab Illo similiter Pergamenus Ilienus; aut ut Ilius et Ilia mas et femina, sic Pergamus et Pergama vir et mulier; et quoniam similia nomina sunt Asia Libya, dicemus Asiaticos et Libyaticos homines.

XXXII.

Quae vocabula dicuntur a verbis, funt ut a scribendo scriptor, a legendo lector, haec quoque non servare similitudinem licet videre ex his: cum similiter dicatur ut ab amando amator, ab salutando salutator, non est a cantando cantator; et cum dicatur lassus sum metendo ferendo, ex his vocabula non reddunt proportionem, quoniam non fit ut messor fertor. Multa sunt item in hac specie in quibus potius consuetudinem sequimur quam rationem verborum.

Praeterea cum sint ab eadem origine verborum vocabula dissimilia superiorum, quod simul habent casus et tempora, quo vocantur participia, et multa sint contraria ut amo amor, lego legor, ab amo et eiusmodi omnibus verbis oriuntur praesens et futurum ut amans et amaturus, ab eis verbis tertium quod debet fingi praeteriti, in lingua Latina reperiri non potest: non ergo est analogia. Sic ab amor legor et eiusmodi verbis vocabulum eius generis praeteriti temporis fit, ut amatus, neque praesentis et futuri ab his fit.

Non est ergo analogia, praesertim cum tantus numerus vocabulorum in eo genere interierit quod dicimus. In his verbis quae contraria non habent, ut loquor et venor, tamen dicimus loquens et venans, locuturus et venaturus, locutus et venatus, quod secundum analogias non est, quoniam dicimus loquor et venor, non loquo et veno, unde illa erant superiora; eo minus servantur, quod ex his quae contraria verba non habent alia efficiunt terna, ut ea quae dixi, alia bina, ut ea quae dicam: currens ambulans, cursurus ambulaturus: tertia enim praeteriti non sunt, ut cursus sum, ambulatus sum.

Ne in his quidem, quae saepius quid fieri ostendunt, servatur analogia: nam ut est a cantando cantitans, ab amando amitans non est et sic multa. Ut in his singularibus, sic in multitudinis: sicut enim cantitantes seditantes non dicuntur.

XXXIII.

Quoniam est vocabulorum genus quod appellant compositivum et negant conferri id oportere cum simplicibus de quibus adhuc dixi, de compositis separatim dicam. Cum ab tibiis et canendo tibicines dicantur, quaerunt, si analogias sequi oporteat, cur non a cithara et psalterio et pandura dicamus citharicen et sic alia; si ab aede et tuendo aeditumus dicatur, cur non ab atrio et tuendo potius atritumus sit quam atriensis; si ab avibus capiendis auceps dicatur, debuisse aiunt a piscibus capiendis ut aucupem sic piscicupem, dici.

Ubi lavetur aes aerarias, non aerelavinas nominari; et ubi fodiatur argentum argentifodinas dici, neque ubi fodiatur ferrum ferrifodinas; qui lapides caedunt lapicidas, qui ligna, lignicidas non dici; neque ut aurificem sic argentificem; non doctum dici indoctum, non salsum insulsum. Sic ab hoc quoque fonte quae profluant, analogiam non servare animadvertere est facile.

XXXIV.

Reliquitur de casibus, in quo Aristarchei suos contendunt nervos.

XXXV.

Primum si in his esset analogia, dicunt debuisse omnis nominatus et articulos habere totidem casus: nunc alios habere unum solum, ut litteras singulas omnes, alios tris, ut praedium praedii praedio, alios quattuor, ut mel mellis melli melle, alios quinque, ut quintus quinti quinto quintum quinte, alios sex, ut unus unius uni unum une uno: non esse ergo in casibus analogias.

XXXVI.

Secundo quod Crates, cur quae singulos habent casus, ut litterae Graecae, non dicantur alpha alphati alphatos, si idem mihi respondebitur quod Crateti, non esse vocabula nostra, sed penitus barbara, quaeram, cur idem nostra nomina et Persarum et ceterorum quos vocant barbaros cum casibus dicant.

Quare si essent in analogia, aut ut Poenicum et Aegyptiorum vocabula singulis casibus dicerent, aut pluribus ut Gallorum ac ceterorum; nam dicunt alaunda alaundas et sic alia. Sin quod scribunt dicent, quod Poenicum sint, singulis casibus ideo eas litteras Graecas nominari: sic Graeci nostra senis casibus non quinis dicere debebant; quod cum non faciunt, non est analogia.

XXXVII.

Quae si esset, negant ullum casum duobus modis debuisse dici; quod fit contra. Nam sine reprehensione vulgo alii dicunt in singulari hac ovi et avi, alii hac ove et ave; in multitudinis hae puppis restis et hae puppes restes; item quod in patrico casu hoc genus dispariliter dicuntur civitatum parentum et civitatum parentium, in accusandi hos montes fontes et hos montis fontis.

XXXVIII.

Item cum, si sit analogia, debeant ab similibus verbis similiter declinatis similia fieri et id non fieri ostendi possit, despiciendam eam esse rationem. Atqui ostenditur: nam qui potest similis esse quam gens, mens, dens? Cum horum casus patricus et accusativus in multitudine sint dispariles: nam a primo fit gentium et gentis, ut ubique ut sit I, ab secundo mentium et mentes, ut in priore solo sit I, ab tertio dentum et dentes, ut in neutro sit.

Sic item quoniam simile est recto casu surus lupus lepus, rogant, quor non dicatur proportione suro lupo lepo. Sin respondeatur similia non esse quod ea vocemus dissimiliter sure lupe lepus (sic enim respondere voluit Aristarchus Crateti: nam cum scripsisset similia esse Philomedes Heraclides Melicertes, dixit non esse similia: in vocando enim cum E brevi dici Philomedes, cum E longo Heraclide, cum A brevi Melicerta), in hoc dicunt Aristarchum non intellexisse quod quaeretur se non solvere.

Sic enim, ut quicque in obliquis casibus discrepavit, dicere potuit propter eam rem rectos casus non esse similis; quom quaeratur duo inter se similia sint necne, non debere extrinsecus adsumi cur similia sint.

Item si esset analogia, similiter ut dicunt aves oves sues, dicerent item avium ovium suium. Si analogia est, inquit, cur populus dicit Dei Penates, Dei Consentes, cum sit ut hic reus ferreus deus, sic hei reei ferreei deei?

Item quaerunt, si sit analogia, cur appellant omnes aedem Deum Consentium et non Deorum Consentium? Item quor dicatur mille denarium, non mille denariorum? Est enim hoc vocabulum figura ut Vatinus, Manilius, denarius: debet igitur dici ut Vatiniorum Maniliorum denariorum; et non equum puplicum mille assarium esse, sed mille assariorum: ab uno enim assario multi assarii, ab eo assariorum.

Item secundum illorum rationem debemus secundis syllabis longis Hectorem Nestorem: est enim ut quaestor praetor Nestor quaestorem praetorem Nestorem, quaestoris praetoris Nestoris; et non debuit dici quibus das, his das: est enim ut hi qui his quis, aut sicut quibus hibus.

Cum dicatur da patri familias, si analogias sequi vellent, non debuerunt dicere hic pater familias, quod est ut Atinae Catinae familiae, sic una Atinia Catinia familia. Item plures patres familias dicere non debuerunt, sed, ut Sisenna scribit, patres familiarum.

Neque oportebat consuetudinem natate alios dicere boum greges, alios boverum, et signa alios Ioum, alios Ioverum, cum esset ut Iovis bovis struis et Iovem bovem struem Iovi bovi strui; nec cum haec convenirent in obliquis casibus, dubitare debuerunt in rectis, in quibus nunc in consuetudine aliter dicere, pro Ious Iupiter, pro bous bos, pro strus strues.

XXXIX.

Deinceps dicam de altero genere vocabulorum, in quo contentiones fiunt, ut album albius albisimum, in quo item analogias non servari apparet: nam cum sit simile salsum caldum et dicatur ab his salsius caldus, salsissimum caldissimum, debuit dici, quoniam simile est bonum malum, ab his bonius et malius, bonissimum et malissimum. Nonne dicitur bonum melius optimum, malum peius pessimum?

In aliis verbis nihil deest, ut dulcis dulcior dulcissimus, in aliis primum, ut peium a peius pessimum, in aliis medium, ut caesior a caesius caesissimus, in aliis bina sunt quae desint ab eadem voce declinata, et ea ita ut alias desint secundum et tertium, ut in hoc mane manius manissime, alias ut duo prima

absint, ut ab optimum optius optum, alias ut primum et tertium desit, ut a melius melum melissumum.

Praeterea si dicerentur similiter, cum similia essent macer tener et macerrimus tenerrimus, non discreparet in his macrior tenerior, neque alia trisyllaba alia quadrisyllaba fierent; et si in his dominaretur similitudo, diceremus ut candidissimus candidissima, pauperrumus pauperrima, sic candidus candida, pauper paupera; et ut dicimus doctus docta, doctissimus doctissima, sic diceremus frugalissumus frugalissima, frugalus et frugala.

Et si proportionem essent verba, ut uno vocabulo dicimus virum et mulierem sapientem et diligentem et sapientiore et diligentiore, sic diceremus item, cum pervenissemus ad summum, quod nunc facimus aliter: nam virum dicimus sapientissimum et diligentissimum, feminam sapientissimam et diligentissimam. Quod ad vocabulorum huius generis exempla pertinet, multa sunt reliqua; sed ea quae dicta, ad iudicandum satis sunt, quor analogias in collatione verborum sequi non debeamus.

XL.

Magnitudinis vocabula cum possint esse terna, ut cista cistula cistella, in aliis media non sunt, ut in his macer macricolus macellus, niger nigricolus nigellus. Item minima in quibusdam non sunt, ut avis avicula avicella, caput capitulum capitellum. In hoc genere vocabulorum quoniam multa desunt, dicendum est non esse in eo potius sequendam quam consuetudinem rationem. Quod ad vocabulorum genera quattuor pertinet, ut in hoc potius consuetudinem quam analogias dominari facile animadverti possit, dictum est.

XLI.

Sequitur de nominibus, quae differunt a vocabulis ideo quod sunt finita ac significant res proprias, ut Paris Helena, cum vocabula sint infinita ac res communis designent, ut vir mulier; e quibus sunt alia nomina ab nominibus, ut Ilium ab Ilo et Ilia ab Illo, alia a vocabulo, ut ab albo Albius, ab atro Atrius. In neutris servata est analogia: nam et cum sit a Romulo Roma, proportionem non est quod debuit esse Romula, non Roma.

Item Perpenna debuit esse Perpenni filia, non Perpennae filius. Nam Perpenna mulieris nomen esse debuit et nata esse a Perpenno, quod est ut Arvernus Percelnus Perpennus, Arverna Percelna Perpenna. Quod si Marcus Perpenna virile est nomen et analogia sequenda, Lucius Aelia et Quintus Mucia virilia nomina esse debebunt; item quae dicunt ab Rhodo, Andro, Cyzico Rhodius, Andrius, Cyzicenus, similiter Cyzicius dici debebat, et civis unus quisque: non ut Athenaeus dicitur rhetor nomine, etsi non sit Atheniensis.

In hoc ipso analogia non est, quod alii nomina habent ab oppidis, alii aut non habent aut non ut debent habent.

Habent plerique libertini a municipio manumissi, in quo, ut societatum et

fanorum servi, non servarunt proportionem rationem, et Romanorum liberti debuerunt dici ut a Faventia Faventinus, ab Reate Reatinus sic a Roma Romanus, ut nominentur libertini orti a publicis servis Romani, qui manumissi ante quam sub magistratuum nomina, qui eos liberarunt, succedere coeperunt.

Hinc quoque illa nomina Lesas, Ufenas, Carrinas, Maecenas, quae cum essent ab loco ut Urbinas, et tamen Urbinius, ab his debuerunt dici ad nostrorum nominum similitudinem Lesius Ufenius Carrinius Maecenius * * *

LIBER IX

I.

* * * Insignis eorum est error qui malunt quae nesciunt docere quam discere quae ignorant: in quo fuit Crates, nobilis grammaticus, qui fretus Chrysippo, homine acutissimo qui reliquit peri anomalias III libros, contra analogian atque Aristarchum est nixus, sed ita, ut scripta indicant eius, ut neutrius videatur pervidisse voluntatem, quod et Chrysippus de inaequabilitate cum scribit sermonis, propositum habet ostendere similes res dissimilibus verbis et dissimiles similibus esse vocabulis notatas, id quod est verum, et quod Aristarchus, de aequabilitate cum scribit eiusdem, verborum similitudinem quandam in inclinatione sequi iubet, quoad patiatur consuetudo.

Sed ii qui in loquendo partim sequi iubent nos consuetudinem partim rationem, non tam discrepant, quod consuetudo et analogia coniunctiores sunt inter se quam iei credunt, quod est nata ex quadam consuetudine analogia et ex hac consuetudine item anomalia. Quare quod consuetudo ex dissimilibus et similibus verbis eorumque declinationibus constat, neque anomalia neque analogia est repudianda, nisi si non est homo ex anima, quod ex corpore et anima.

Sed ea quae dicam quo facilius pervideri possint, prius de trinis copulis discernendum (nam confusim ex utraque parte pleraque dicuntur, quorum alia ad aliam referri debent summam): primum de copulis naturae et usus: haec enim duo sunt quo deriguntur diversa, quod aliud est dicere esse verborum analogias, aliud dicere uti oportere analogiis; secundum de copulis multitudinis ac finis, utrum omnium verborum dicatur esse analogiarum usus an maioris partis; tertium de copulis personarum, qui eis debeant uti, quae sunt plures.

Alia enim populi universi, alia singulorum, et de iei non eadem oratoris et poetae, quod eorum non idem ius. Itaque populus universus debet in omnibus verbis uti analogia et, si perperam est consuetus, corrigere se ipsum, cum orator non debeat in omnibus uti, quod sine offensione non potest facere, cum poeta transilire lineas impune possit.

Populus enim in sua potestate, singuli in illius: itaque ut suam quisque consuetudinem, si mala est, corrigere debet, sic populus suam. Ego populi consuetudinis non sum ut dominus, at ille meae est. Ut rationi optemperare debet gubernator, gubernatori unus quisque in navi, sic populus rationi, nos singuli populo. Quare ad quamcumque summam in dicendo referam si animadvertes, intelleges, utrum dicatur analogia esse an uti oportere ea; itemque intelleges si ad analogiam usum loquendi oporteat redigere, tum dici id in populum aliter ac in singulos nec idem de omnibus dici in eum qui sit in populo.

II.

Nunc iam primum dicam pro universa analogia, cur non modo non videatur esse reprehendenda, sed etiam cur in usu quodammodo sequenda; secundo de singulis criminibus, quibus rebus possint quae dicta sunt contra solvi, dicam ita ut generatim comprehendam et ea quae in priore libro sunt dicta et ea quae possunt dici atque illic praeterii.

III.

Primum quod aiunt, qui bene loqui velit consuetudinem sequi oportere, non rationem similitudinum, quod, alteram si neglegat, sine offensione facere non possit, alteram si sequatur, quod sine reprehensione non sit futurum, errant, quod qui in loquendo consuetudinem qua oportet uti sequitur, eam sequitur non sine ratione.

IV.

Nam vocabula ac verba quae declinamus similiter, ea in consuetudine esse videmus et ad eam conferimus et, si quid est erratum, non sine ea corrigimus. Nam ut, qui triclinium constrarunt, si quem lectum de tribus unum imparem posuerunt aut de paribus nimium aut parum produxerunt, una corrigimus et ad consuetudinem communem et ad aliorum tricliniorum analogias, sic si quis in oratione in pronuntiando ita declinat verba ut dicat disparia, quod peccat redigere debemus ad ceterorum similiumvuerborum rationem.

V.

Cum duo peccati genera sint in declinatione, unum quod in consuetudinem perperam receptum est, alterum quod nondum est et perperam dicatur, unum dant non oportere dici, quod non sit in consuetudine, alterum non conceditur quin ita dicatur, ut sit similiter, cum id faciant, ac, si quis puerorum per delicias pedes male ponere atque imitari vatias coeperit, hos corrigi oportere si concedant, contra si quis in consuetudine ambulandi iam factus sit vatia aut conpernis, si eum corrigi non concedant.

Non sequitur, ut stulte faciant qui pueris in geniculis alligent serperastra, ut eorum depravata corrigant crura? Cum vituperandus, non sit medicus qui e longinqua mala consuetudine aegrum in meliorem traducit, quare reprehendus sit qui orationem minus valentem propter malam consuetudinem traducat in meliorem?

VI.

Pictores Apelles, Protogenes, sic alii artufices egregii non reprehendundi, quod consuetudinem Miconos, Dioris, Arimmae, etiam superiorum non sunt secuti: Aristophanes improbandus, qui potius in quibusdam veritatem quam consuetudinem secutus?

VII.

Quod si viri sapientissimi, et in re militari et in aliis rebus multa contra veterem consuetudinem cum essent ausi, laudati, despiciendi sunt qui potiorum dicunt oportere esse consuetudinem ratione.

VIII.

An cum quis perperam consuerit quid facere in civitate, non modo non patiemur, sed etiam poena afficiemus, idem si quis perperam consuerit dicere verbum, non corrigemus, cum id fiat sine poena?

IX.

Et hi qui pueros in ludum mittunt, ut discant quae nesciunt verba quemadmodum scribant, idem barbato qui ignorabunt verba quemadmodum oporteat dici non docebimus, ut sciant qua ratione conveniat dici?

X.

Sed ut nutrix pueros a lacte non subito avellit a consuetudine, cum a cibo pristino in meliorem traducit, sic maiores in loquendo a minus commodis verbis ad ea quae sunt cum ratione modice traducere oportet. Cum sint in consuetudine contra rationem alia verba ita ut ea facile tolli possint, alia ut videantur esse fixa, quae leviter haerent ac sine offensione commutari possunt statim ad rationem corrigi oportet, quae autem sunt ita ut in praesentia corrigere nequeas quin ita dicas, his oportet, si possis, non uti: sic enim obsolescent ac postea iam oblitterata facilius corrigi poterunt.

XI.

Quas novas verbi declinationes ratione introductas respuit forum, his boni poetae, maxime scaenici, consuetudine subigere aures populi debent, quod poetae multum possunt in hoc: propter eos quaedam verba in declinatione melius, quaedam deterius dicuntur. Consuetudo loquendi est in motu: itaque solent fieri et meliora deteriora et deteriora meliora; verba perperam dicta apud antiquos aliquos propter poetas non modo nunc dicuntur recte, sed etiam quae ratione dicta sunt tum, nunc perperam dicuntur.

XII.

Quare qui ad consuetudinem nos vocant, si ad rectam, sequemur: in eo quoque enim est analogia; si ad eam invitant quae est depravata, nihilo magis sequemur, nisi cum erit necesse, quam in ceteris rebus mala exempla: nam ea quoque, cum aliqua vis urget, inviti sequemur.

XIII.

Neque enim Lysippus artificum priorum potius secutus est vitiosa quam artem; sic populus facere debet, etiam singuli, sine offensione quod fiat populi.

Qui amissa non modo quaerant, sed etiam quod indicium dent, idem, ex sermone si quid deperiit, non modo nihil impendunt ut requirant, sed etiam contra indices repugnant ne restituantur?

Verbum quod novum et ratione introductum quo minus recipiamus, vitare non debemus.

XIV.

Nam ad usum in vestimentis aedificiis suppellectili novitati non impedit vetus consuetudo: quem enim amor assuetudinis potius in pannis possessorem retinet, quem ad nova vestimenta traducit?

XV.

An non saepe veteres leges abrogatae novis cedunt?

XVI.

Nonne inusitatis formis vasorum recentibus e Graecia adlatis oblitteratae antiquae consuetudinis sinorum et capularum species? His formis vocabulorum incontaminatis uti nolent quas docuerit ratio propter consuetudinem veterem? Et tantum inter duos sensus interesse volunt, ut oculis semper aliquas figuras suppellectilis novas conquirant, contra auris expertis velint esse?

XVII.

Quotus quisque iam servos habet priscis nominibus? Quae mulier suum instrumentum vestis atque auri veteribus vocabulis appellat? Sed indoctis non tam irascendum quam huiusce pravitatis patronis.

Si enim usquequaque non esset analogia, tum sequebatur, ut in verbis quoque non esset, non, cum esset usquequaque, ut est, non esse in verbis.

XVIII.

Quae enim est pars mundi quae non innumerabiles habeat analogias? Caelum an mare an terra, quae in his?

Nonne in caelo ut ab aequinoctiali circulo ad solstitialem et hinc ad septemtrionalem divisum, sic contra paribus partibus idem a bruma versum contraria parte? Non quantum polus superior abest a septemtrionali circulo et is a solstitiali, quem sol circumit cum it ad solstitium, tantundem abest inferior ab eo quem antarcticon vocant astrologi et is a brumali? Non, quemadmodum quodque signum exortum hoc anno, quotquot annis eodem modo exoritur?

Num aliter sol a bruma venit ad aequinoctium, ac contra cum ad solstitium venit, ad aequinoctialem circulum et inde ad brumam? Nonne luna, ut ab sole discedit ad aquilonem et inde redit in eandem viam, sic inde fertur ad austrum et regreditur inde? Sed quid plura de astris, ubi difficilius reperitur quid sit aut fiat in motibus dissimiliter?

XIX.

At in mari, credo, motus non habent similitudines geminas, qui in XXIII horis lunaribus cotidie quater se mutant, ac cum sex horis aestus creverunt, totidem decreverunt, rursus idem, itemque ab his. An hanc analogiam ad diem servant, ad mensem non item, alios motus sic item cum habeant aliis inter se convenientes? De quibus in libro quem de Aestuariis feci scripsi.

XX.

Non in terra in stationibus servata analogia? Nec cuius modi in praeterito tempore fructuum genera reddidit, similia in praesenti reddit, et cuius modi tritico iacto reddidit segetes, sic hordeo sato proportionem reddidit parilis? Non, ut Europa habet flumina lacus, montis campos, sic habet Asia?

XXI.

Non in volucribus generatim servatur analogia? Non ex aquilis aquilae atque ut ex turdis qui procreantur turdi, sic ex reliquis sui cuiusque generis?

XXII.

An aliter hoc fit quam in aere in aqua? Non hic conchae inter se generatim innumerabili numero similes? Non pisces? An e muraena fit lupus aut merula? Non bos ad bovem collatus similis, et qui ex his progenerantur inter se vituli? Etiam ubi dissimilis fetus, ut ex asino et equa mulus, tamen ibi analogia: quod ex quocumque asino et equa nascitur id est mulus aut mula, ut ex equo et asina hinnulei.

XXIII.

Non sic ex viro et muliere omnis similis partus, quod pueri et puellae? Non horum ita inter se omnia similia membra, ut separatim in suo utroque genere similitudine sint paria? Non, omnes cum sint ex anima et corpore, partes quoque horum proportionem similes?

Quid ergo cum omnes animae hominum sint diuisae in octonas partes, hae inter se non proportionem similes? Quinque quibus sentimus, sexta qua cogitamus, septima qua progengeramus, octava qua uoces mittimus? Igitur quoniam qua loquimur uoce oratio est, hanc quoque necesse est natura habere analogias: itaque habet.

XXIV.

An non vides, ut Graeci habeant eam quadripertitam, unam in qua sint casus, alteram in qua tempora, tertiam in qua neutrum, quartum in qua utrumque, sic nos habere? Ecquid verba nescis ut apud illos sint alia finita, alia non, sic utraque esse apud nos?

Equidem non dubito, quin animadverteris item in ea innumerabilem similitudinum numerum, ut trium temporum verbi aut trium personarum.

XXV.

Quis enim potest non una animadvertisse in omni oratione esse ut legebam lego legam sic lego legis legit, cum haec eadem dicantur alias ut singula, alias ut plura significantur? Quis est tam tardus qui illas quoque non animadverterit similitudines, quibus utimur in imperando, quibus in optando, quibus in interrogando, quibus in infectis rebus, quibus in perfectis, sic in aliis discriminibus?

XXVI.

Quare qui negant esse rationem analogiae, non vident naturam non solum orationis, sed etiam mundi; qui autem vident et sequi negant oportere, pugnant contra naturam, non contra analogiam, et pugnant volsillis, non gladio, cum pauca excepta verba ex pelago sermonis populi minus usu trita afferant, cum dicant propterea analogias non esse, similiter ut, si quis viderit mutilum bovem aut luscum hominem claudicantemque equum, neget in bovum hominum et equorum natura similitudines proportionem constare.

XXVII.

Qui autem duo genera esse dicunt analogiae, unum naturale, quod ut ex satis nascuntur lentibus lentes sic ex lupino lupinum, alterum voluntarium, ut in fabrica, cum vident scaenam ut in dexteriore parte sint ostia, sic esse in sinistiore simili ratione factam, de his duobus generibus naturalem esse analogiam, ut sit in motibus caeli, voluntariam non esse, quod ut quoque fabro lubitum sit possit facere partis scaenae: sic in hominum partibus esse analogias, quod eas natura faciat, in verbis non esse, quod ea homines ad suam quisque voluntatem fingat, itaque de eisdem rebus alia verba habere Graecos, alia Syros, alia Latinos: ego declinatus verborum et voluntarios et naturalis esse puto, voluntarios quibus homines vocabula imposuerint rebus quaedam, ut ab Romulo Roma, ab Tibure Tiburtes, naturales ut ab impositis vocabulis quae inclinantur in tempora aut in casus, ut ab Romulo Romuli Romulum et ab dico dicebam dixeram.

Itaque in voluntariis declinationibus inconstantia est, in naturalibus constantia; quae utrasque quoniam iei non debeant negare esse in oratione,

quom in mundi partibus omnibus sint, et declinationes verborum innumerabiles, dicendum est esse in his analogias. Neque ideo statim ea in omnibus verbis est sequenda: nam si qua perperam declinavit verba consuetudo, ut ea aliter non possint efferri sine offensione multorum, hinc rationem verborum praetermittendam ostendit loquendi ratio.

XXVIII.

Quod ad universam pertinet causam, cur similitudo et sit in oratione et debeat observari et quam ad finem quoque, satis dictum. Quare quod sequitur de partibus singulis deinceps expediemus ac singula crimina quae dicunt contra analogias solvemus.

In quo animadvertito natura quadruplicem esse formam, ad quam in declinando accommodari debeant verba: quod debeat subesse res quae, designetur, et ut sit ea res in usu, et ut vocis natura ea sit quae significavit, ut declinari possit, et similitudo figurae verbi ut sit ea quae ex se declinatu genus prodere certum possit.

Quo neque a terra terrus ut dicatur postulandum est, quod natura non subest, ut in hoc alterum maris, alterum feminae debeat esse; sic neque propter usum, ut Terentius significat unum, plures Terentii, postulandum est, ut sic dicamus faba et fabae: non enim in simili usu utrumque; neque ut dicimus ab Terentius Terentium, sic postulandum ut inclinemus ab A et B, quod non omnis vox natura habet declinatus.

Neque in forma collata quaerendum solum, quid habeat in figura simile, sed etiam nonnunquam in eo quem habeat effectum. Sic enim lana Gallicana et Apula videtur imperito similis propter speciem, cum peritus Apulam emat pluris, quod in usu firmior sit. Haec nunc strictim dicta apertiora fient infra. Incipiam hinc.

XXIX.

Quod rogant ex qua parte oporteat simile esse verbum, a voce an a significatione, respondemus a voce; sed tamen nonnunquam quaerimus genere similitudine sint quae significantur ac nomen virile cum virili conferimus, feminae cum muliebri: non quod id quod significant vocem commoveat, sed quod nonnunquam in re dissimili parilis figurae formas in simili imponunt dispariles, ut calcei muliebres sint an viriles dicimus ad similitudinem figurae, cum tamen sciamus nonnunquam et mulierem habere calceos viriles et virum muliebris.

Sic dici virum Perpennam ut Alfenam muliebri forma et contra parietem ut abietem esse forma similem, quom alterum vocabulum dicatur virile, alterum muliebre et utrumque natura neutrum sit. Itaque ea virilia dicimus non quae virum significant, sed quibus proponimus hic et hi, et sic muliebria in quibus dicere possumus haec aut hae.

Quare nihil est, quod dicunt Theona et Diona non esse similis, si alter est Aethiops, alter albus, si analogia rerum dissimilitudines adsumat ad discernendum vocis verbi figuras.

XXXI.

Quod dicunt simile sit necne nomen nomini impudenter Aristarchum praecipere oportere spectare non solum ex recto, sed etiam ex eorum vocandi casu, esse enim deridiculum, si similes inter se parentes sint, de filiis iudicare: errant, quod non ab eorum obliquis casibus fit, ut recti simili facie ostendantur, sed propter eos facilius perspicui similitudo potest eorum quam vim habeat, ut lucerna in tenebris allata non facit ut quae ibi sunt posita similia sint, sed ut videantur, quae sunt quoius modi sint.

Quid similis videtur quam in his est extrema littera crux Phryx? Quas, qui audit voces, auribus discernere potest nemo, cum easdem non esse similes ex declinatis verbis intellegamus, quod cum sit cruce et Phryges et de his extremis syllabis exemptum sit E, ex altero fit ut ex C et S crux, ex altero G et S Phryx. Quod item apparet, cum est demptum S: nam fit unum cruce, alterum Phryge.

XXXII.

Quod aiunt, cum in maiore parte orationis non sit similitudo, non esse analogian, dupliciter stulte dicunt, quod et in maiore parte est et si in minore parte sit, tamen sit, nisi etiam nos calceos negabunt habere, quod in maiore parte corporis calceos non habeamus.

XXXIII.

Quod dicunt nos dissimilitudinem potius gratam acceptamque habere quam similitudinem: itaque in vestitu in supellectile delectari varietate, non paribus subuculis uxoris, respondeo, si varietas iucunditas, magis varium esse in quo alia sunt similia, alia non sunt: itaque sicut abacum argento ornari, ut alia paria sint, alia disparia, sic orationem.

Rogant, si similitudo sit sequenda, cur malimus habere lectos alios ex ebore, alios ex testudine, sic item genere aliquo alio. Ad quae dico non dissimilitudines solum nos, sed similitudines quoque sequi saepe. Itaque ex eadem supellectili licet videre: nam nemo facit triclinii lectos nisi paris et materia et altitudine et figura. Quis facit mappas triclinaris non similis inter se? Quis pulvinos? Quis denique cetera, quae unius generis sint plura?

Cum, iniquiunt, utilitatis causa introducta sit oratio, sequendum non quae habebit similitudinem, sed quae utilitatem. Ego utilitatis causa orationem factam concedo, sed ut vestimenta: quare ut hic similitudines sequimur, ut

virilis tunica sit virili similis, item toga togae, sic mulierum stola ut sit stolae proportionem et pallium pallio simile, sic cum sint nomina utilitatis causa, tamen virilia inter se similia, item muliebria inter se sequi debemus.

XXXIV.

Quod aiunt ut persedit et perstitit sic periacuit et percubuit quoniam non sint, non esse analogias, et in hoc errant: quod duo posteriora ex prioribus declinata non sunt, cum analogia polliceatur ex duobus similibus similiter declinatis similia fore.

XXXV.

Qui dicunt quod sit ab Romulo Roma et non Romula neque ut ab ove ovilia sic a bove bovia, non esse analogias, errant, quod nemo pollicetur e vocabulo vocabulum declinari recto casu singulari in rectum singularem, sed ex duobus vocabulis similibus casus similiter declinatos similes fieri.

XXXVI.

Dicunt, quod vocabula litterarum Latinarum non declinentur in casus, non esse analogias. Hi ea quae natura declinari non possunt, eorum declinatus requirunt, proinde et non eorum dicatur esse analogia quae ab similibus verbis similiter essent declinata. Quare non solum in vocabulis litterarum haec non requirenda analogia, sed ne in syllaba quidem ulla, quod dicimus hoc BA, huius BA, sic alia.

Quod si quis in hoc quoque velit dicere esse analogias rerum, tenere potest: ut enim dicunt ipsi alia nomina, quod quinque habeant figuras, habere quinque casus, alia quattuor, sic minus alia, dicere poterunt esse litteras ac syllabas in voce quae singulos habeant casus, in rebus pluris; quemadmodum inter se conferent ea quae quaternos habebunt vocabulis casus, item ea inter se quae ternos, sic quae singulos habebunt, ut conferant inter se dicentes, ut sit hoc A, huic A, esse hoc E, huic E.

XXXVII.

Quod dicunt esse quaedam verba quae habeant declinatus, ut caput capitis, nihil nihili, quorum par reperiri quod non possit, non esse analogias, respondendum sine dubio, si quod est singulare verbum, id non habere analogias: minimum duo esse debent verba, in quibus sit similitudo. Quare in hoc tollunt esse analogias.

Sed nihilum vocabulum recto casu apparet in hoc:

Quae dedit ipsa capit neque dispendi facit hilum, quod valet nec dispendii facit quicquam.

Idem hoc obliquo apud Plautum:

Video enim te nihili pendere prae Philolacho omnis homines,

quod est ex ne et hili: quare dictus est nihili qui non hili erat. Casus tantum commutantur de quo dicitur, ut de homine: dicimus enim hic homo nihili et huius hominis nihili et hunc hominem nihili. Si in illo commutarem, diceremus ut hoc linum et libum, sic nihilum, non hic nihili, et ut huic lino et libo, sic nihilo, non huic nihili. Potest dici patricus casus, ut ei praeponantur nomina plura, ut hic casus Terentii, hunc casum Terentii, hic miles legionis, huius militis legionis, hunc militem legionis.

XXXVIII.

Negant, cum omnis natura sit aut mas aut femina aut neutrum, non debuisset ex singulis vocibus ternas figuras vocabulorum fieri, ut albus alba album; nunc fieri in multis rebus binas, ut Metellus Metella, Aemilius Aemilia, nonnulla singula, ut tragoedus, comoedus; sic esse Marcum, Numerium, at Marcam, at Numeriam non esse; dici corvum, turdum, non, dici corvam, turdam; contra dici pantheram, merulam, non dici pantherum, merulum; nullius nostrum filium et filiam non apte discerni marem ac feminam, ut Terentium et Terentiam, contra deorum liberos et servorum non itidem, ut Iovis filium et filiam, Iovem et Iovam; item magnum numerum vocabulorum in hoc genere non servare analogias.

Ad haec dicimus, omnis orationis quamvis res naturae subsit, tamen si ea in usum, non pervenerit, eo non pervenire verba: ideo equus dicitur et equa: in usu enim horum discrimina; corvus et corva non, quod sine usu id, quod dissimilis naturae. Itaque quaedam aliter olim ac nunc: nam et tum omnes mares et feminae dicebantur columbae, quod non erant in eo usu domestico quo nunc, et nunc contra, propter domesticos usus quod internovimus, appellatur mas columbus, femina columba.

Natura cum tria genera transit et id est in usu discriminatum, tum denique apparet, ut est in doctus et docta et doctum: doctrina enim per tria haec transire potest et usus docuit discriminare doctam rem ab hominibus et in his marem ac feminam. In mare et femina et neutro neque natura maris transit neque feminae neque neutra, et ideo non dicitur feminus femina feminum, sic reliqua: itaque singularibus ac secretis vocabulis appellati sunt.

Quare in quibus rebus non subest similis natura aut usus, in his vocabulis huiusce modi ratio quaeri non debet: ergo dicitur ut surdus vir, surda mulier, sic surdum theatrum, quod omnes tres res ad auditum sunt comparatae; contra nemo dicit cubiculum surdum, quod ad silentium, non ad auditum; at si fenestram non habet, dicitur caecum, ut caecus et caeca, quod omnia non habent quod lumen habere debent.

Mas et femina habent inter se natura quandam societatem, nullam societatem neutra cum his, quod sunt diversa; inter se quoque de his perpauca sunt quae habeant quandam communitatem. Dei et servi nomina quod non item ut libera nostra transeunt, eadem est causa, quod ad usum attinet et

institutui opus fuit de liberis, de reliquis nihil attinuit, quod in servis gentilicia natura non subest in usu, in nostris nominibus qui sumus in Latio et liberi, necessaria. Itaque ibi apparet analogia ac dicitur Terentius vir, Terentia femina, Terentium genus.

In praenominibus ideo non fit item, quod haec instituta ad usum singularia, quibus discernerentur nomina gentilicia, ut ab numero Secunda, Tertia, Quarta in mulieribus, in viris ut Quintus, Sextus, Decimus, sic ab aliis rebus. Cum essent duo Terentii aut plures, discernendi causa, ut aliquid singulare haberent, notabant, forsitan ab eo, qui mane natus diceretur, ut is Manius esset, qui luci, Lucius, qui post patris mortem, Postumus.

E quibus aequae cum item accidisset feminis, proportionem ita appellata declinarant praenomina mulierum antiqua, Mania, Lucia, Postuma: videmus enim Maniam matrem Larum dici, Luciam Volumniam Saliorum Carminibus appellari, Postumam a multis post patris mortem etiam nunc appellari.

Quare quocumque progressa est natura cum usu vocabuli, similiter proportionem propagata est analogia, cum in quibus declinatus voluntarii maris et feminae et neutri, quae voluntaria, non debeant similiter declinari, sed in quibus naturales, sint declinatus hi qui esse reperiuntur. Quocirca in tribus generibus nominum inique tollunt analogias.

XXXIX.

Qui autem eas reprehendunt, quod alia vocabula singularia sint solum, ut cicer, alia multitudinis solum, ut scalae, cum debuerint omnia esse duplicia, ut equus equi, analogiae fundamentum esse obliviscuntur naturam et usum. Singulare est quod natura unum significat, ut equus, aut quod coniuncta quodammodo ad unum usu, ut bigae: itaque ut dicimus una Musa, sic dicimus unae bigae.

Multitudinis vocabula sunt unum infinitum, ut Musae, alterum finitum, ut duae, tres, quattuor: dicimus enim ut hae Musae sic unae bigae et binae et trinae bigae, sic deinceps. Quare tam unae et uni et una quodammodo singularia sunt quam unus et una et unum; hoc modo mutat, quod altera in singularibus, altera in coniunctis rebus; et ut duo tria sunt multitudinis, sic bina trina.

Est tertium quoque genus singulare ut in multitudine, uter, in quo multitudinis ut utrei; uter poeta singulari, utri poetae multitudinis est. Quae explicata natura apparet non debere omnia vocabula multitudinis habere par singulare: omnes enim numeri ab duobus susum versus multitudinis sunt neque eorum quisquam habere potest singulare compar. Iniuria igitur postulant, si qua sint singularia, oportere habere multitudinis.

XL.

Item qui reprehendunt, quod non dicatur ut unguentum unguenta vinum vina sic acetum aceta garum gara, faciunt imperite: qui ibi desiderant multitudinis

vocabulum, quae sub mensuram ac pondera potius quam sub numerum succedunt: nam in plumbo, argento, cum incrementum accessit, dicimus multum, sic multum plumbum, argentum; non plumba, argenta, cum quae ex hisce fiant, dicamus plumbea et argentea (aliud enim cum argenteum: nam id tum cum iam vas: argenteum enim, si pocillum aut quid item): quod pocilla argentea multa, non quod argentum multum.

Ea, natura in quibus est mensura, non numerus, si genera in se habent plura et ea in usum venerunt, a genere multo, sic vina et unguenta, dicta: alii generis enim vinum quod Chio, aliud quod Lesbo, sic ex regionibus aliis. Aequae ipsa dicuntur nunc melius unguenta, cui nunc genera aliquot. Si item discrimina magna essent olei et aceti et sic ceterarum rerum eiusmodi in usu communi, dicerentur sic olea et aceta ut vina. Quare in utraque re inique rescindere conantur analogias, et cum in dissimili usu similia vocabula quaerant et cum item ea quae metimur atque ea quae numeramus dici putent oportere.

XLII.

Item reprehendunt analogias, quod dicantur multitudinis nomine publicae balneae, non balnea, contra quod privati dicant unum balneum, quom, plura balnea non dicant. Quibus responderi potest non esse reprehendendum, quod scalae et aquae caldae, pleraque cum causa, multitudinis vocabulis sint appellata neque eorum singularia in usum venerint; idemque item contra. Primum balneum (nomen est Graecum), cum introiit in urbem, publice ibi consedit, ubi bina essent coniuncta aedificia lavandi causa, unum ubi viri, alterum ubi mulieres lavarentur; ab eadem ratione domi suae quisque ubi lavatur balneum dixerunt et, quod non erant duo, balnea dicere non consuerunt, cum hoc antiqui non balneum, sed lavatrinam appellare consuissent.

Sic aquae caldae ab loco et aqua, quae ibi scateret, cum ut colerentur venissent in usum nostris, cum aliae ad alium morbum idoneae essent, eae cum plures essent, ut Puteolis et in Tuscis, quibus utebantur, multitudinis potius quam singulari vocabulo appellarunt. Sic scalas, quod ab scandendo dicuntur et singulos gradus scanderent, magis erat quaerendum, si appellassent singulari vocabulo scalam, cum origo nominatus ostenderet contra.

XLII.

Item reprehendunt de casibus, quod quidam nominatus habent rectos, quidam obliquos, quod dicunt utrosque in vocibus oportere. Quibus idem responderi potest, in quibus usus aut natura non subsit, ibi non esse analogiam * * *

Sed ne in his quidem vocabulis quae declinantur, si transeunt e recto casu in rectum casum: quae tamen fere non discedunt ab ratione sine iusta causa, ut hi qui gladiatores Faustini: nam quod plerique dicuntur, ut tris extremas syllabas habeant easdem, Cascelliani, Caeciliani, Aquiliani, animadvertant,

unde oriuntur, nomina dissimilia Cascellius, Caecilius, Aquilius, Faustus: quod si esset Faustius, recte dicerent Faustianos; sic a Scipione quidam male dicunt Scipioninos: nam est Scipionarios. Sed, ut dixi, quod ab huiuscemodi cognominibus raro declinantur cognomina neque in usum etiam perducta, natant quaedam.

XLIII.

Item dicunt, cum sit simile stultus luscus et dicatur stultus stultior stultissimus, non dici luscus luscior luscissimus, sic in hoc genere multa. Ad quae dico ideo fieri, quod natura nemo lusco magis sit luscus, cum stultior fieri videatur.

XLIV.

Quod rogant, cur non dicamus mane manius manissime, item de vesperi: in tempore vere magis et minus esse non potest, ante et post potest. Itaque prius est hora prima quam secunda, non magis hora. Sed magis mane surgere tamen dicitur: qui primo mane surgit, magis mane surgit quam qui non primo: ut enim dies non potest esse magis quam dies, sic mane non magis quam mane; itaque ipsum hoc quod dicitur magis sibi non constat, quod magis mane significat primum mane, magis vespere novissimum vesper.

XLV.

Item ab huiuscemodi dissimilitudinibus reprehenditur analogia, quod cum sit anus cadus simile et sit ab anu anicula anicilla, a cado duo reliqua quod non sint propagata, sic non dicatur a piscina piscinula piscinilla. Ad haec respondeo huiuscemodi vocabulis analogias esse, ut dixi, ubi magnitudo animadvertenda sit in unoquoque gradu eaque sit in usu communi, ut est cista cistula cistella et canis catulus catellus, quod in pecoris usu non est. Itaque consuetudo frequentius res in binas dividi partis ut maius et minus, ut lectus et lectulus, arca et arcula, sic alia.

XLVI.

Quod dicunt casus alia non habere rectos, alia obliquos et ideo non esse analogias, falsum est. Negant habere rectos ut in hoc frugis frugi frugem, item colem colis cole, obliquos non habere ut in hoc Diespiter Diespitri Diespitrem, Maspiter Maspitri Maspitrem.

Ad haec respondeo et priora habere nominandi et posteriora obliquos. Nam et frugi rectus est natura frux, at secundum consuetudinem dicimus ut haec avis, haec ovis, sic haec frugis; sic secundum naturam nominandi est casus cols, secundum consuetudinem colis, cum utrumque conveniat ad analogian, quod et id quod in consuetudine non est cuius modi debeat esse apparet, et quod est in consuetudine nunc in recto casu, eadem est analogia ac pleraque,

quae ex multitudine cum transeunt in singulare, difficulter efferuntur ore. Sic cum transiretur ex eo quod dicebatur haec oves, una non est dicta ovis sine I, sed additum I ac factum ambiguum verbum nominandi an patrici esset casus. Ut ovis, et avis.

Sic in obliquis casibus cur negent esse Diespitri Diespitrem non video, nisi quod minus est tritum in consuetudine quam Diespiter; quod in nihil argumentum est: nam tam casus qui non tritus est quam qui est. Sed esto in casuum serie alia vocabula non habere nominandi, alia de obliquis aliquem: nihil enim ideo quo minus siet ratio percellere poterit hoc crimen.

Nam ut signa quae non habent caput aut aliquam aliam partem, nihilo minus in reliquis membris eorum esse possunt analogiae, sic in vocabulis casuum possunt item fieri iacturae. Potest etiam refingi ac reponi quod aberit, ubi patietur natura et consuetudo: quod nonnunquam apud poetas invenimus factum, ut in hoc apud Naevium in Clastidio:

Vita insepulta laetus in patriam redux.

XLVII.

Item reprehendunt, quod dicatur haec strues, hic Hercules, hic homo: debuisset enim dici, si esset analogia, hic Hercul, haec strus, hic homen. Non haec ostendunt nomina non analogian esse, sed obliquos casus non habere caput ex sua analogia. Non, ut si in Alexandri statua imposueris caput Philippi, membra convenient ad rationem, sic et Alexandri membrorum simulacro caput quod respondeat item sit? Non, si quis tunicam in usu ita consuit, ut altera plagula sit angustis clavis, altera latis, utraque pars in suo genere caret analogia.

XLVIII.

Item negant esse analogias, quod alii dicunt cupressus, alii cupressi, item de ficis platanis et plerisque arboribus, de quibus alii extremum US, alii EI faciunt. Id est falsum: nam debent dici E et I, fici ut nummi, quod est ut nummis ficis, ut nummorum ficorum. Si essent plures ficus, essent ut manus; diceremus ut manibus, sic ficibus, et ut manuum, sic ficuum, neque has ficos diceremus, sed ficus, ut non manos appellamus, sed manus, nec consuetudo diceret singularis obliquos casus huius fici neque hac fico, ut non dicit huius mani, sed huius manus, nec hac mano, sed hac manu.

XLIX.

Etiam illud putant esse causae, cur non sit analogia, quod Lucilius scribit: Decusis,
Sive decusibus est.

Qui errant, quod Lucilius non debuit dubitare, quod utrumque: nam in aere

usque ab asse ad centussis numerus aes adsignificat, et eius numero finiti casus omnes ab dupondio sunt, quod dicitur a multis duobus modis hic dupondius et hoc dupondium, ut hoc gladium et hic gladius; ab tressibus virilia multitudinis hi tresses et “his tressibus confido,” singulare “hoc tressis habeo” et “hoc tressis confido,” sic deinceps ad centussis. Deinde numerus aes non significat.

Numeri qui aes non significant, usque a quattuor ad centum, triplicis habent formas, quod dicuntur hi quattuor, hae quattuor, haec quattuor; cum perventum est ad mille, quartum assumit singulare neutrum, quod dicitur hoc mille denarium, a quo multitudinis fit milia denarium.

Quare quoniam ad analogias quod pertineat non opus est ut omnia similia dicantur, sed ut in suo quaeque genere similiter declinentur, stulte quaerunt, cur as et dupondius et tressis non dicantur proportionem, cum as sit simplex, dupondius fictus, quod duo asses pendebat, tressis ex tribus aeris quod sit. Pro assibus nonnunquam aes dicebant antiqui, a quo dicimus assem tenentes “hoc aere aeneaque libra” et “mille aeris legasse.”

Quare quod ab tressis usque ad centussis numeri ex partibus eiusdem modi sunt compositi, eiusdem modi habent similitudinem: dupondius, quod dissimilis est, ut debuit, dissimilem habet rationem. Sic as, quoniam simplex est ac principium, et unum significat et multitudinis habet suum infinitum: dicimus enim asses, quos cum finimus, dicimus dupondius et tressis et sic porro.

Sic videtur mihi, quoniam finitum et infinitum habeat dissimilitudinem, non debere utrumque item dici, eo magis quod in ipsis vocabulis ubi additur certus numerus miliaris aliter atque in reliquis dicitur: nam sic loquuntur, hoc mille denarium, non hoc mille denariorum, et haec duo milia denarium, non duo milia denariorum. Si esset denarii in recto casu atque infinitam multitudinem significaret, tunc in patrico denariorum dici oportebat; et non solum in denariis, victoriatis, drachmis, nummis, sed etiam in viris idem servari oportere, cum dicimus iudicium fuisse triumvirum, decemvirum, centumvirum, non triumvirorum, decemvirorum, centumvirorum.

Numeri antiqui habent analogias, quod omnibus est una regula, duo actus, tres gradus, sex decuriae, quae omnia similiter inter se respondent. Regula est numerus novenarius, quod, ab uno ad novem cum pervenimus, rursus redimus ad unum et VIII; hinc et LXXXX et nongenta ab una sunt natura novenaria; sic ab octonaria, et deorsum versus ad singularia perveniunt.

Actus primus est ab uno ad DCCCC, secundus a mille ad nongenta milia; quod idem valebat unum et mille, utrumque singulari nomine appellatur: nam ut dicitur hoc unum, haec duo, sic hoc mille, haec duo milia et sic deinceps multitudinis in duobus actibus reliqui omnes item numeri. Gradus singularis est in utroque actu ab uno ad novem, denarius gradus a decem ad LXXXX, centenarius a centum ad DCCCC. Ita tribus gradibus sex decuriae fiunt, tres miliariae, tres minores. Antiqui his numeris fuerunt contenti.

Ad hos tertium et quartum actum addentes ab deciens et ab deciens miliens

minores imposuerunt vocabula, neque ratione, sed tamen non contra est eam de qua scribimus analogiam. Nam deciens dicatur hoc deciens ut mille hoc mille, ut sit utrumque sine casibus vocis, dicemus ut hoc mille, huius mille, sic hoc deciens, huius deciens, neque eo minus in altero, quod est mille, praeponemus hi mille, horum mille, sic hi deciens, horum deciens.

L.

Quoniam in eo est nomen commune, quam vocant homonymian, obliqui casus ab eodem capite, ubi erit homonymia, quo minus dissimiles fiant, analogia non prohibet. Itaque dicimus hic Argus, cum hominem dicimus, cum oppidum, Graece Graecaniceve hoc Argos, cum Latine hi Argi. Item faciemus, si eadem vox nomen et verbum significabit, ut et in casus et in tempora dispariliter declinetur, ut faciemus a Meto quod nomen est Metonis Metonem, quod verbum est metam metebam.

LI.

Reprehendunt, cum ab eadem voce plura sunt vocabula declinata, quas synonymias appellant, ut Alcmaeus et Alcmaeo, sic Geryon, Geryoneus, Geryones. In hoc genere quod casus perperam permutant quidam, non reprehendunt analogiam, sed qui eis utuntur imperite; quod quisque caput prenderit, sequi debet eius consequentis casus in declinando ac non facere, cum dixerit recto casu Alcmaeus, in obliquis Alcmaeoni et Alcmaeonem; quod si miscuerit et non secutus erit analogias, reprehendendum.

LII.

Reprehendunt Aristarchum, quod haec nomina Melicertes et Philomedes similia neget esse, quod vocandi casus habet alter Melicerta, alter Philomedes, sic qui dicat lepus et lupus non esse simile, quod alterius vocandi casus sit lupe, alterius lepus, sic socer, macer, quod in transitu fiat ab altero trisyllabum soceri, ab altero bisyllabum macri.

De hoc etsi supra responsum est, cum dixi de lana, hic quoque amplius adiciam similia non solum a facie dici, sed etiam ab aliqua coniuncta vi et potestate, quae et oculis et auribus latere soleant: itaque saepe gemina facie mala negamus esse similia, si sapore sunt alio; sic equos eadem facie nonnullos negamus esse similis, si natione sunt ex procreante dissimiles.

Itaque in hominibus emendis, si natione alter est melior, emimus pluris. Atque in hisce omnibus similitudines non sumimus tantum a figura, sed etiam aliunde, ut in equis aetas, ut in asinis cuius modi faciant pullos, ut in pomis quo sint suco. Si igitur idem sequitur in similitudine verborum quis, reprehendendus non est.

Quare similitudinum discernendarum causa nonnunquam ut pronomen assumitur, sic casum aliquem assumimus, ut in his nemus, lepus, hic lepus,

hoc nemus: itaque discedunt ac dicuntur hi lepores, haec nemora. Sic aliud si quid assumptum erit extrinsecus, quo similitudo penitus perspici possit, non nimis erit remotum ab natura: neque enim magnetas lapides duo inter se similes sint necne, perspicere possis, nisi minutum extrinsecus prope apposueris ferrum, quod similes lapides similiter ducunt, dissimiliter dissimiles.

Quod ad nominatuom analogiam pertinet, ita deliquatum arbitror, ut omnia quae dicuntur contra ad respondendum ab his fontibus sumi possit.

LIII.

Quod ad verborum temporalium rationem attinet, cum partes sint quattuor, tempora, personae, genera, divisiones, ex omni parte quoniam reprehendunt, ad singula respondebo.

LIV.

Primum quod aiunt analogias non servari in temporibus, cum dicant legi lego legam et sic similiter alia: nam quae sint ut legi rem perfectam significare, duo reliqua lego et legam inchoatam, iniuria reprehendunt: nam ex eodem genere et ex divisione idem verbum, quod sumptum est, per tempora traduci infecti potest, ut discebam disco discam, et eadem perfecti, ut didiceram didici didicero.

LV.

Ex quo licet scire verborum rationem constare, sed eos, qui trium temporum verba pronuntiare velint, inscienter id facere; item illos qui reprehendunt, quod dicamus amor amabor amatus sum: non enim debuisse in una serie unum verbum esse duplex, cum duo simplicia essent. Neque ex divisione si unius modi ponas verba, discrepant inter se: nam infecta omnia simplicia similia sunt, et perfecta duplicia inter se paria in omnibus verbis, ut haec amabar amor amabor, amatus eram amatus sum amatus ero.

Quare item male dicunt ferio feriam percussi, quod est ordo ferio feriam feriebam, percussi percussero percusseram. Sic deinceps in reliquis temporibus reprehendenti responderi potest.

LVI.

Similiter errant qui dicunt ex utraque parte verba omnia commutare syllabas oportere aut nullum, in his pungo pungam pupugi, tundo tundam tutudi: dissimilia enim conferunt, verba infecti cum perfectis. Quod si infecta modo conferrent, omnia verbi principia incommutabilia viderentur, ut in his pungebam pungo pungam et contra ex utraque parte commutabilia, si perfecta ponerent, ut pupugeram pupugi pupugero.

LVII.

Item male conferunt fui sum ero, quod fui est perfectum, cuius series sibi, ut debet, in omnibus partibus constat, quod est fueram fui fuero; de infectis sum quod nunc dicitur olim dicebatur esum et in omnibus personis constabat, quod dicebatur esum es est, eram eras erat, ero eris erit; sic huiusce modi cetera servare analogiam videbis.

LVIII.

Etiam in hoc reprehendunt, quod quaedam verba neque personas habent ternas neque tempora terna: id imperite reprehendunt, ut si quis reprehendat naturam, quod non unius modi finxerit animalis omnis. Si enim natura non omnes formae verborum terna habent tempora, ternas personas, non habent totidem verborum divisiones. Quare cum imperamus, natura quod infecta verba solum habent, cum aut praesenti aut absenti imperamus, fiunt terna, ut lege legito legat: perfectum enim imperat nemo. Contra quae sunt indicandi, ut lego legis legit, novena fiunt verba infecti, novena perfecti.

LIX.

Quocirca non si genus cum genere discrepat, sed in suo quique genere si quid deest, requirendum. Ad haec addita si erunt ea quae de nominatibus supra sunt dicta, facilius omnia solventur. Nam ut illic externis caput rectus casus, sic hic in forma est persona eius qui loquitur et tempus praesens, ut scribo lego.

Quare ut illic fit, si hic item acciderit, in formula ut aut caput non sit aut ex alieno genere sit, proportionem eadem quae illic dicimus, cur nihilominus servetur analogia. Item, sicut illic caput suum habebit et in obliquis casibus transitio erit in aliam quam formulam, qua assumpta reliqua facilius possint videri verba, unde sint declinata (fit enim, ut rectus casus nonnunquam sit ambiguus), ut in hoc verbo volo, quod id duo significat, unum a voluntate, alterum a volando; itaque a volo intellegimus et volare et velle.

LX.

Quidam reprehendunt, quod pluit et luit dicamus in praeterito et praesenti tempore, cum analogiae sui cuiusque temporis verba debeant discriminare. Falluntur: nam est ac putant aliter, quod in praeteritis U dicimus longum pluit luit, in praesenti breve pluit luit: ideoque in lege venditionis fundi “ruta caesa” ita dicimus, ut U producamus.

LXI.

Item reprehendunt quidam, quod putant idem esse sacrifico et sacrificor, lavat et lavatur; quod sit an non, nihil commovet analogiam, dum sacrifico qui dicat servet sacrificabo et sic per totam formam, ne dicat sacrificatur aut

sacrificatus sum: haec enim inter se non conveniunt.

Apud Plautum, cum dicit:

Piscis ego credo qui usque dum vivunt lavant
Diu minus lavari quam haec lavat Phronesium,

ad lavant lavari non convenit, ut I sit postremum, sed E; ad lavantur analogia lavari reddit: quod Plauti aut librarii mendum si est, non ideo analogia, sed qui scripsit est reprehendendus. Omnino et lavat et lavatur dicitur separatim recte in rebus certis, quod puerum nutrix lavat, puer a nutrice lavatur, nos in balneis et lavamus et lavamur.

Sed consuetudo alterum utrum cum satis haberet, in toto corpore potius utitur lavamur, in partibus lavamus, quod dicimus lavo manus, sic pedes et cetera. Quare e balneis non recte dicunt lavi, lavi manus recte. Sed quoniam in balneis labor lautus sum, sequitur, ut contra, quoniam est soleo, oporteat dici solui, ut Cato et Ennius scribit, non ut dicit volgus, solitus sum, debere dici; neque propter haec, quod discrepant in sermone pauca, minus est analogia, ut supra dictum est.

LXII.

Item cur non sit analogia, afferunt, quod ab similibus similia non declinentur, ut ab dolo et colo: ab altero enim dicitur dolavi, ab altero colui; in quibus assumi solet aliquid, quo facilius reliqua dicantur, ut in Myrmecidis operibus minutis solet fieri: igitur in verbis temporalibus, quom similitudo saepe sit confusa, ut discerni nequeat, nisi transieris in aliam personam aut in tempus, quae proposita sunt non esse similia intellegitur, cum transitum est in secundam personam, quod alterum est dolas, alterum colis.

Itaque in reliqua forma verborum suam utrumque sequitur formam. Utrum in secunda persona forma verborum temporalium habeat in extrema syllaba AS an ES an IS aut IS, ad discernendas similitudines interest: quocirca ibi potius index analogiae quam in prima, quod ibi abstrusa est dissimilitudo, ut apparet in his meo, neo, ruo: ab his enim dissimilia fiunt transitu, quod sic dicuntur meo meas, neo nes, ruo ruis, quorum unumquodque suam conservat similitudinis formam.

LXIII.

Analogiam item de his quae appellantur participia reprehendunt multi; iniuria: nam non debent dici terna ab singulis verbis amaturus amans amatus, quod est ab amo amans et amaturus, ab amor amatus. Illud analogia quod praestare debet, in suo quicque genere habet, casus, ut amatus amato et amati amatis; et sic in muliebribus amata et amatae; item amaturus eiusdem modi habet declinationes, amans paulo aliter; quod hoc genus omnia sunt in suo genere similia proportionem, sic virilia et muliebria sunt eadem.

De eo quod in priore libro extremum est, ideo non esse analogiam, quod qui de ea scripserint aut inter se non convenient aut in quibus convenient ea cum consuetudinis discrepent verbis, utrumque est leve: sic enim omnis repudiandum erit artis, quod et in medicina et in musica et in aliis multis discrepant scriptores; item in quibus conveniunt in scriptis, si ea tamen repudiat natura: quod ita ut dicitur non sit ars, sed artifex reprehendendus, qui dici debet in scribendo non vidisse verum, non ideo non posse scribi verum.

Qui dicit hoc monti et hoc fonti, cum alii dicant hoc monte et hoc fonte, sic alia quae duobus modis dicuntur, cum alterum sit verum, alterum falsum, non uter peccat tollit analogias, sed uter recte dicit confirmat; et quemadmodum is qui peccat in his verbis, ubi duobus modis dicuntur, non tollit rationem cum sequitur falsum, sic etiam in his quae non duobus dicuntur, si quis aliter putat dici oportere atque oportet, non scientiam tollit orationis, sed suam inscientiam denudat.

LXV.

Quibus rebus solvi arbitraremur posse quae dicta sunt priori libro contra analogiam, ut potui brevi percucurri. Ex quibus si id confecissent quod volunt, ut in lingua Latina esset anomalia, tamen nihil egissent ideo, quod in omnibus partibus mundi utraque natura inest, quod alia inter se similia, alia dissimilia sunt, sicut in animalibus dissimilia sunt, ut equus bos ovis homo, item alia, et in uno quoque horum genere inter se similia innumerabilia. Item in piscibus dissimilis muraena lupo, is soleae, haec muraenae et mustelae, sic aliis, ut maior ille numerus sit similitudinum earum quae sunt separatim in muraenis, separatim in asellis, sic in generibus aliis.

Quare cum in inclinationibus verborum numerus sit magnus a dissimilibus verbis ortus, quod etiam vel maior est in quibus similitudines reperiuntur, confitendum est esse analogias. Itemque cum ea non multo minus quam in omnibus verbis patiat uti consuetudo communis, fatendum illud quoquo modo analogiam sequi nos debere universos, singulos autem praeterquam in quibus verbis offensura sit consuetudo communis, quod ut dixi aliud debet praestare populus, aliud e populo singuli homines.

Neque id mirum est, cum singuli quoque non sint eodem iure: nam liberior potest poeta quam orator sequi analogias. Quare cum hic liber id quod pollicitus est demonstraturum absolverit, faciam finem; proximo deinceps de declinatorum verborum forma scribam.

LIBER X

I.

In verborum declinationibus disciplina loquendi dissimilitudinem an similitudinem sequi deberet, multi quaesierunt. Cum ab his ratio quae ab similitudine oriretur vocaretur analogia, reliqua pars appellaretur anomalia: de qua re primo libro quae dicerentur cur dissimilitudinem ducem haberi oporteret, dixi, secundo contra quae dicerentur, cur potius similitudinem conveniret praeponi: quarum rerum quod nec fundamenta, ut debuit, posita ab ullo neque ordo ac natura, ut res postulat, explicita, ipse eius rei formam exponam.

Dicam de quattuor rebus, quae continent declinationes verborum: quid sit simile ac dissimile, quid ratio quam appellant logon, quid pro portione quod dicunt ana logon, quid consuetudo; quae explicatae declarabunt analogiam et anomalam, unde sit, quid sit, cuius modi sit.

II.

De similitudine et dissimilitudine ideo primum dicendum, quod ea res est fundamentum omnium declinationum ac continet rationem verborum. Simile est quod res plerasque habere videtur easdem quas illud cuiusque simile: dissimile est quod videtur esse contrarium huius. Minimum ex duobus constat omne simile, item dissimile, quod nihil potest esse simile, quin alicuius sit simile, item nihil dicitur dissimile, quin addatur quous sit dissimile.

Sic dicitur similis homo homini, equus equo, et dissimilis homo equo: nam similis est homo homini ideo, quod easdem figuras membrorum habent, quae eos dividunt ab reliquorum animalium specie. In ipsis hominibus simili de causa vir viro similior quam vir mulieri, quod plures habent easdem partis; et sic senior seni similior quam puero. Eo porro similiores sunt qui facie quoque paene eadem, habitu corporis, filo: itaque qui plura habent eadem, dicuntur similiores; qui proxume accedunt ad id, ut omnia habeant eadem, vocantur gemini, simillimi.

Sunt qui tris naturas rerum putent esse, simile, dissimile, neutrum, quod alias vocant non simile, alias non dissimile (sed quamvis tria sint simile dissimile neutrum, tamen potest dividi etiam in duas partes sic, quodcumque conferas aut simile esse aut non esse); simile esse et dissimile, si videatur esse ut dixi, neutrum, si in neutram partem praeponderet, ut si duae res quae conferuntur vixenas habent partes et in his denas habeant easdem, denas alias ad similitudinem et dissimilitudinem aequae animadvertendas: hanc naturam plerique subiciunt sub dissimilitudinis nomen.

Quare quoniam fit ut potius de vocabulo quam de re controversia esse videatur, illud est potius advertendum, quom simile quid esse dicitur, cui parti simile dicatur esse (in hoc enim solet esse error), quod potest fieri ut homo

homini similis non sit, ut multas partis habeat similis et ideo dici possit similis habere oculos, manus, pedes, sic alias res separatim et una plures.

Itaque quod diligenter videndum est in verbis, quas partis et quot modis oporteat similis habere quae similitudinem habere dicuntur, ut infra apparebit, is locus maxime lubricus est. Quid enim similius potest videri indiligenti quam duo verba haec suis et suis? Quae non sunt, quod alterum significat suere, alterum suem. Itaque similia vocibus esse ac syllabis confitemur, dissimilia esse partibus orationis videmus, quod alterum habet tempora, alterum casus, quae duae res vel maxime discernunt analogias.

Item propinquiora genere inter se verba similem saepe pariunt errorem, ut in hoc, quod nemus, et lepus videtur esse simile, quom utrumque habeat eundem casum rectum; sed non est simile, quod eis certae similitudines opus sunt, in quo est ut in genere nominum sint eodem, quod in his non est: nam in virili genere est lepus, ex neutro nemus; dicitur enim hic lepus et hoc nemus. Si eiusdem generis essent, utrique praeponeretur idem ac diceretur aut hic lepus et hic nemus aut hoc nemus, hoc lepus.

Quare quae et cuius modi sunt genera similitudinum ad hanc rem, perspicendum ei qui declinationes verborum proportionem sintne quaeret. Quem locum, quod est difficilis, qui de his rebus scripserunt aut vitaverunt aut incepterunt neque adsequi potuerunt.

Itaque in eo dissensio neque ea unius modi apparet: nam alii de omnibus universis discriminibus posuerunt numerum, ut Dionysius Sidonius, qui scripsit ea esse septuaginta unum, alii partis eius quae habet casus, cuius eidem hic cum dicat esse discrimina quadraginta septem, Aristocles rettulit in litteras XIII, Parmeniscus VIII, sic alii pauciora aut plura.

Quarum similitudinum si esset origo recte capta et inde orsa ratio, minus erraretur in declinationibus verborum. Quarum ego principia prima duum generum sola arbitror esse, ad quae similitudines exigi oporteat: e quis unum positum in verborum materia, alterum ut in materiae figura, quae ex declinatione fit.

Nam debet esse unum, ut verbum verbo, unde declinetur, sit simile; alterum, ut e verbo in verbum declinatio, ad quam conferetur, eiusdem modi sit: alias enim ab similibus verbis similiter declinantur, ut ab erus ferus, ero fero, alias dissimiliter erus ferus, eri ferum. Cum utrumque et verbum verbo erit simile et declinatio declinationi, tum denique dicam esse simile ac duplicem et perfectam similitudinem habere, id quod postulat analogia.

Sed ne astutius videar posuisse duo genera esse similitudinum sola, cum utriusque inferiores species sint plures, si de his reticuero, ut mihi relinquam latebras, repetam ab origine similitudinum quae in conferendis verbis et inclinandis sequendae aut vitandae sint.

Prima divisio in oratione, quod alia verba nusquam declinantur, ut haec vix mox, alia declinantur, ut ab lima limae, a fero ferebam, et cum nisi in his verbis quae declinantur non possit esse analogia, qui dicit simile esse mox et nox errat, quod non est eiusdem generis utrumque verbum, cum nox

succedere debeat sub casuum rationem, mox neque debeat neque possit.

Secunda divisio est de his verbis quae declinari possunt, quod alia sunt a voluntate, alia a natura. Voluntatem appello, cum unus quisvis a nomine aliae rei imponit nomen, ut Romulus Romae; naturam dico, cum universi acceptum nomen ab eo qui imposuit non requirimus quemadmodum is velit declinari, sed ipsi declinamus, ut huius Romae, hanc Romam, hac Roma. De his duabus partibus voluntaria declinatio refertur ad consuetudinem, naturalis ad rationem.

Quare proinde ac simile conferre non oportet ac dicere, ut sit ab Roma Romanus, sic ex Capua dici oportere Capuanus, quod in consuetudine vehementer natat, quod declinantes imperite rebus nomina imponunt, a quibus cum accepit consuetudo, turbulenta necesse est dicere. Itaque neque Aristarchei neque alii in analogiis defendendam eius susceperunt causam, sed, ut dixi, hoc genere declinatio in communi consuetudine verborum aegrotat, quod oritur e populo multiplici et imperito: itaque in hoc genere in loquendo magis anomalia quam analogia.

Tertia divisio est: quae verba declinata natura; ea dividuntur in partis quattuor: in unam quae habet casus neque tempora, ut docilis et facilis; in alteram quae tempora neque casus, ut docet facit; in tertiam quae utraque, ut docens faciens; in quartam quae neutra, ut docte et facete. Ex hac divisione singulis partibus tres reliquae dissimiles. Quare nisi in sua parte inter se collata erunt verba, si conveniunt, non erit ita simile, ut debeat facere idem.

Unius cuiusque partis quoniam species plures, de singulis dicam. Prima pars casualis dividitur in partis duas, in nominatus scilicet et articulos, quod aequae finitum et infinitum est ut hic et quis; de his generibus duobus utrum sumpseris, cum reliquo non conferendum, quod inter se dissimiles habent analogias.

In articulis vix adumbrata est analogia et magis rerum quam vocum; in nominatibus magis expressa ac plus etiam in vocibus ac syllabarum similitudinibus quam in rebus suam optinet rationem. Etiam illud accedit ut in articulis habere analogias ostendere sit difficile, quod singula sint verba, hic contra facile, quod magna sit copia similium nominatum. Quare non tam hanc partem ab illa dividendum quam illud videndum, ut satis sit verecundiae etiam illam in eandem arenam vocare pugnatum.

Ut in articulis duae partes, finitae et infinitae, sic in nominatibus duae, vocabulum et nomen: non enim idem oppidum et Roma, cum oppidum sit vocabulum, Roma nomen, quorum discrimen in his reddendis rationibus alii discernunt, alii non; nos sicubi opus fuerit, quid sit et cur, ascribemus.

Nominatui ut similis sit nominatus, habere debet ut sit eodem genere, specie eadem, sic casu, exitu eodem: specie, ut si nomen est quod conferas, cum quo conferas sit nomen; genere, ut non solum unum sed utrumque sit virile; casu, ut si alterum sit dandi, item alterum sit dandi; exitu, ut quas unum habeat extremas litteras, easdem alterum habeat.

Ad hunc quadruplicem fontem ordines deriguntur bini, uni transversi, alteri

derecti, ut in tabula solet in qua latrunculis ludunt. Transversi sunt qui ab recto casu obliqui declinantur, ut albus albi albo; derecti sunt qui ab recto casu in rectos declinantur, ut albus alba album; utrique sunt partibus senis. Transversorum ordinum partes appellantur casus, derectorum genera, utrisque inter se implicatis forma.

Dicam prius de transversis. Casuum vocabula alius alio modo appellavit; nos dicemus, qui nominandi causa dicitur, nominandi vel nominativum * * *

* * * dicuntur unae scopae, non dicitur una scopa: alia enim natura, quod priora simplicibus, posteriora in coniunctis rebus vocabula ponuntur, sic bigae, sic quadrigae a coniunctu dictae. Itaque non dicitur, ut haec una lata et alba, sic una biga, sed unae bigae, neque dicitur ut hae duae latae, albae, sic hae duae bigae et quadrigae, sed hae binae bigae et quadrigae.

Item figura verbi qualis sit refert, quod in figura vocis alias commutatio fit in primo verbo suit modo suit, alias in medio, ut curso cursito, alias in extremo, ut doceo docui, alias communis, ut lego legi. Refert igitur ex quibus litteris quodque verbum constet, maxime extrema, quod ea in plerisque commutatur.

Quare in his quoque partibus similitudines ab aliis male, ab aliis bene quod solent sumi in casibus conferendis, recte an perperam videndum; sed ubicumque commoventur litterae, non solum eae sunt animadvertendae, sed etiam quae proximae sunt neque moventur: haec enim vicinitas aliquantum potest in verborum declinationibus.

In quis figuris non ea similia dicemus quae similis res significant, sed quae ea forma sint, ut eius modi res similis ex instituto significare plerumque soleant, ut tunicam virilem et muliebrem dicimus non eam quam habet vir aut mulier, sed quam habere ex instituto debet: potest enim muliebrem vir, virilem mulier habere, ut in scaena ab actoribus haberi videmus, sed eam dicimus muliebrem, quae de eo genere est quo indutui mulieres ut uterentur est institutum. Ut actor stolam muliebrem sic Perpenna et Caecina et Spurrinna figura muliebria dicuntur habere nomina, non mulierum.

Flexurae quoque similitudo videnda ideo quod alia verba quam viam habeant ex ipsis verbis, unde declinantur, apparet, ut quemadmodum oporteat uti praetor consul, praetori consuli; alia ex transitu intelleguntur, ut socer macer, quod alterum fit socerum, alterum macrum, quorum utrumque in reliquis a transitu suam viam sequitur et in singularibus et in multitudinis declinationibus. Hoc fit ideo quod naturarum genera sunt duo quae inter se conferri possunt, unum quod per se videri potest, ut homo et equus, alterum sine assumpta aliqua re extrinsecus perspicere non possit, ut equus et equiso uterque enim dicitur ab equo.

Quare hominem homini similem esse aut non esse, si contuleris, ex ipsis hominibus animadversis scies; at duo inter se similiterne sint longiores quam sint eorum fratres, dicere non possis, si illos breviores cum quibus conferuntur quam longi sint ignores; sic latiorum atque altiorum, item cetera eiusdem generis sine assumpto extrinsecus aliquo perspicere similitudines non possunt.

Sic igitur quidam casus quod ex hoc genere sunt, non facile est dicere similis esse, si eorum singulorum solum animadvertas voces, nisi assumpseris alterum, quo flectitur in transeundo vox.

Quod ad nominatuom similitudines animadvertendas arbitratus sum satis esse tangere, haec sunt. Relinquitur de articulis, in quibus quaedam eadem, quaedam alia. De quinque enim generibus duo prima habent eadem, quod sunt et virilia et muliebria et neutra, et quod alia sunt ut significant unum, alia ut plura, et de casibus quod habent quinos: nam vocandi voce notatus non est. Proprium illud habent, quod partim sunt finita, et hic haec, partim infinita, ut quis et quae, quorum quod adumbrata et tenuis analogia, in hoc libro plura dicere non necesse est.

Secundum genus quae verba tempora habent neque casus, sed habent personas. Eorum declinatum species sunt sex: una quae dicitur temporalis, ut legebam gemebam, lego, gemo; altera personarum, ut sero meto, seris metis; tertia rogandi, ut scribone legone, scribisne legisne. Quarta respondendi, ut fingo pingo, fingis pingis; quinta optandi, ut dicerem facerem, dicam faciam; sexta imperandi, ut cape rape, capito rapito.

Item sunt declinatum species quattuor quae tempora habent sine personis: in rogando, ut foditurne sereturne, et fodieturne sereturne. Ab respondendi specie eadem figurae fiunt extremis syllabis demptis; optandi species, ut vivatur ametur, viveretur amaretur. Imperandi declinatus sintne habet dubitationem et eorum sitne haec ratio: paretur pugnetur, parator pugnator.

Accedunt ad has species a copulis divisionum quadrinis: ab infecti et perfecti, ut emo edo, emi edi; ab semel et saepius, ut scribo lego, scriptito lectito; a faciendi et patiendi, ut uro ungo, uror ungor; a singulari et multitudinis, ut laudo culpo, laudamus culpamus. Huius generis verborum cuius species exposui quam late quidque pateat et cuius modi efficiat figuras, in libris qui de formulis verborum erunt diligentius expedietur.

Tertii generis, quae declinantur cum temporibus ac casibus ac vocantur a multis ideo participalia, sunt hoc genere * * *

* * * quemadmodum declinemus, quaerimus casus eius, etiamsi siqui finxit poeta aliquod vocabulum et ab eo casum ipse aliquem perperam declinavit, potius eum reprehendimus quam sequimur. Igitur ratio quam dico utrubique, et in his verbis quae imponuntur et in his quae declinantur, neque non etiam tertia illa, quae ex utroque miscetur genere.

Quarum una quaeque ratio collata cum altera aut similis aut dissimilis, aut saepe verba alia, ratio eadem, et nonnunquam ratio alia, verba eadem. Quae ratio in amor amori, eadem in dolor dolori, neque eadem in dolor dolore, et cum eadem ratio quae est in amor et amoris sit in amores et amorum, tamen ea, quod non in ea qua oportet confertur materia, per se solum efficere non potest analogias propter disparilitatem vocis figurarum, quod verbum copulatum singulare cum multitudine: ita cum est pro portione, ut eandem habeat rationem, tum denique ea ratio conficit id quod postulat analogia; de qua deinceps dicam.

Sequitur tertius locus, quae sit ratio pro portione; ea Graece vocatur analogon; ab analogo dicta analogia. Ex eodem genere quae res inter se aliqua parte dissimiles rationem habent aliquam, si ad eas duas alterae duae res allatae sunt, quae rationem habeant eandem, quod ea verba bina habent eundem logon, dicitur utrumque separatim analogon, simul collata quattuor analogia.

Nam ut in geminis, cum similem dicimus esse Menaechmum Menaechmo, de uno dicimus; cum similitudinem esse in his, de utroque: sic cum dicimus eandem rationem habere assem ad semissem quam habet in argento libella ad simbellam, quid sit analogon ostendimus; cum utrobique dicimus et in aere et in argento esse eandem rationem, tum dicimus de analogia.

Ut sodalis et sodalitas, civis et civitas non est idem, sed utrumque ab eodem ac coniunctum, sic analogon et analogia idem non est, sed item est congeneratum. Quare si homines sustuleris, sodalis sustuleris; si sodalis, sodalitatem: sic item si sustuleris logon, sustuleris analogon; si id, analogian.

Quae cum inter se tanta sint cognatione, debetis suptilius audire quam dici expectare, id est cum dixero quid de utroque et erit commune, ne expectes, dum ego in scribendo transferam in reliquum, sed ut potius tu persequare animo.

Haec fiunt in dissimilibus rebus, ut in numeris si contuleris cum uno duo, sic cum decem viginti: nam quam rationem duo ad unum habent, eandem habent viginti ad decem; in nummis in similibus sic est ad unum victoriatum denarius, sicut ad alterum victoriatum alter denarius; sic item in aliis rebus omnibus pro portione dicuntur ea, in quo est sic quadruplex natura, ut in progenie quomodo est filius ad patrem, est filia ad matrem, et ut est in temporibus meridies ad diem, sic media nox ad noctem.

Hoc poetae genere in similitudinibus utuntur multum, hoc acutissime geometrae, hoc in oratione diligentius quam alii ab Aristarcho grammatici, ut cum dicuntur pro portione similia esse amorem amori, dolorem dolori, cum ita dissimile esse videant amorem et amori, quod est alio casu, item dolorem dolori, sed dicunt, quod ab similibus.

Nonnunquam rationes habet implicatas duas, ut sit una directa, altera transversa. Quod dico, apertius sic fiet. Esto sic expositos esse numeros, ut in primo versu sit unum duo quattuor, in secundo decem viginti quadraginta, in tertio centum ducenti quadringenti. In hac formula numerorum duo inerunt quos dixi logoe, qui diuersas faciant analogias: unus duplex qui est in obliquis versibus, quod est ut unus ad duo, sic duo ad quattuor; alter decemplex in directis ordinibus, quod est ut unum ad decem, sic decem ad centum.

Similiter in verborum declinationibus est bivium, quod et ab recto casu declinantur in obliquos et ab recto casu in rectum, ita ut formulam similiter efficiant, quod sit primo versu hic albus, huic albo, huius albi, secundo haec alba, huic albae, huius albae, tertio hoc album, huic albo, huius albi. Itaque

fiunt per obliquas declinationes ex his analogiae hoc genus Albius Atrius, Albio Atrio, quae scilicet erit particula ex illa binaria, per directas declinationes Albius Atrius, Albia Atria, quae scilicet denaria, formula analogiarum, de qua supra dixi.

Analogia quae dicitur, eius genera sunt duo: unum deiunctum sic est: ut unum ad duo sic decem ad viginti; alterum coniunctum sic: ut est unum ad duo, sic duo ad quattuor. In hoc quod duo bis dicuntur et tum cum conferimus ad unum et tunc cum ad quattuor, hoc quoque natura dicitur quadruplex,; sic e septem chordis citharae tamen duo dicuntur habere tetrachorda, quod quemadmodum crepat prima ad quartam chordam, sic quarta ad septimam respondet, media est alterius prima, alterius extrema. Medici in aegroto septimos dies qui observant, quarto die ideo diligentius signa morbi advertunt, quod quam rationem habuit primus dies ad quartum eandem praesagit habiturum qui est futurus ab eo quartus, qui est septimus a primo.

Quadruplices deiunctae in casibus sunt vocabulorum, ut rex regi, lex legi, coniunctae sunt triplices in verborum tribus temporibus, ut legebam lego legam, quod quam rationem habet legebam ad lego hanc habet lego ad legam. In hoc fere omnes homines peccant, quod perperam in tribus temporibus haec verba dicunt, cum proportionem volunt pronuntiare.

Nam cum sint verba alia infecta, ut lego et legis, alia perfecta, ut legi et legisti, et debeant sui cuiusque generis in coniungendo copulari, et cum recte sit ideo lego ad legebam, non recte est lego ad legi, quod legi significat quod perfectum: ut haec tutudi pupugi, tundo pungo, tundam pungam, item necatus sum verberatus sum, necor verberor, necabor verberabor, iniuria reprehendant, quod et infecti inter se similia sunt et perfecti inter se, ut tundebam tundo tundam et tutuderam tutudi tutudero; sic amabar amor amabor, et amatus eram amatus sum amatus ero. Itaque inique reprehendunt qui contra analogias dicunt, cur dispariliter in tribus temporibus dicantur quaedam verba, natura cum quadruplex sit analogia.

Id nonnunquam, ut dixi, pauciores videtur habere partes, sic etiam alias pluris, ut cum est: quemadmodum ad tria unum et duo, sic ad sex duo et quattuor, quae tamen quadripartito comprehenditur forma, quod bina ad singula conferuntur; quod in oratione quoque nonnunquam reperietur sic: ut Diomedes confertur Diomedis et Diomedis, sic dicitur ab Hercules Herculi et Herculis.

Et ut haec ab uno capite ac recto casu in duo obliquos discedunt casus, sic contra multa ab duobus capitibus recti casuis confluunt in obliquom unum. Nam ut ab his rectis hi Baebiei, hae Baebiae fit his Baebieis, sic est ab his hi Caelii, hae Caeliae his Caeliis. A duobus similibus dissimiliter declinantur, ut fit in his nemus holus, nemora holera. Alia ab dissimilibus similiter declinantur, ut in articulis ab hic iste, hunc istunc.

Analogia fundamenta habet aut a voluntate hominum aut a natura verborum aut a re utraque. Voluntatem dico impositionem vocabulorum, naturam declinationem uocabulorum, quo decurritur sine doctrina. Qui

impositionem sequetur, dicet, si simile in recto casu dolus et malus, fore in obliquo dolo et malo; qui naturam sequetur, si sit simile in obliquis Marco Quinto, fore ut sit Marcus Quintus; qui utrumque sequetur, dicet si sit simile, transitus ut est in servus serve, fore ut sit item cervus cerge. Commune omnium est, ut quattuor figurae vocis habeant proportionem declinatus.

Primum genus est ortum ab similitudine in rectis casibus, secundum ab similitudine quae est in obliquis, tertium ab similitudine quae est in transitibus de casu in casum. Primo genere ab imposito ad naturam proficiscimur, in secundo contra, in tertio ab utroque. Quocirca etiam hoc tertium potest bifariam divisum tertium et quartum dici, quod in eo vel prosus et rursus potest dici.

Qui initia faciet analogiae impositiones, ab his obliquas figuras declinare debet; qui naturam, contra; qui ab utraque, reliquas declinationes ab eiusmodi transitibus. Impositio est in nostro dominatu, nos in naturae: quemadmodum enim quisque volt, imponit nomen, at declinat, quemadmodum volt natura.

Sed quoniam duobus modis imponitur vocabulum aut re singulari aut multitudine, singulari, ut cicer, multitudinis, ut scalae, nec dubium est, quin ordo declinatum, in quo res singulares declinabuntur solae, ab singulari aliquo casu proficiscatur, ut cicer ciceri ciceris, item contra in eo ordine, qui multitudinis erit solum, quin a multitudinis aliquo casu ordiri conveniat, ut scalae scalis scalas: aliud videndum est, cum duplex natura copulata ac declinatum bini fiant ordines, ut est Mars Martes, unde tum ratio analogiae debeat ordiri, utrum ab singulari re in multitudinem an contra.

Neque enim si natura ab uno ad duo pervenit, idcirco non potest apertius esse in docendo posterius, ut inde incipias, ut quid sit prius ostendas. Itaque et hi qui de omni natura disputant atque ideo vocantur physici, tamen ex his ab universa natura profecti retro quae essent principia mundi ostendunt. Oratio cum ex litteris constet, tamen ex ea grammatici de litteris ostenderunt.

Quare in demonstrando, quoniam potius proficisci oportet ab eo quod apertius est quam ab eo quod prius est et potius quam a corrupto principio ab incorrupto, ab natura rerum quam ab lubricatione hominum, et Haec tria quae sequenda magis sunt minus sunt in singularibus quam in multitudinis, a multitudine commodius potest ordiri, quod in his principiis minus rationis verbis fingendis. Verborum formas facilius ex multitudinis singularis videri posse quam ex singularibus multitudinis haec ostendunt: trabes trabs, duces dux.

Videmus enim ex his verbis trabes duces de extrema syllaba E litteram exclusam et ideo in singulari factum esse trabs dux. Contra ex singularibus non tam videmus quemadmodum facta sint ex B et S trabs et ex C et S dux.

Si multitudinis rectus casus forte figura corrupta erit, id quod accidit raro, prius id corrigemus quam inde ordiemur; ab obliquis adsumere oportet figuras eas quae non erunt ambiguae, sive singulares sive multitudinis, ex quibus id, cuius modi debent esse, perspicui possit.

Nam nonnunquam alterum ex altero videtur, ut Chrysippus scribit, quemadmodum pater ex filio et filius ex patre, neque minus in fornicibus propter sinistram dextra stat quam propter dextram sinistra. Quapropter et ex rectis casibus obliqui et ex obliquis recti et ex singularibus multitudinis et ex multitudinis singulares nonnunquam recuperari possunt.

Principium id potissimum sequi debemus, ut in eo fundamentum sit, natura, quod in declinationibus ibi facilius ratio. Facile est enim animadvertere, peccatum magis cadere posse in impositiones eas quae fiunt plerumque in rectis casibus singularibus, quod homines imperiti et dispersi vocabula rebus imponunt, quocumque eos libido invitavit: natura incorrupta plerumque est suapte sponte, nisi qui eam usu inscio deprauabit.

Quare si quis principium analogiae potius posuerit in naturalibus casibus quam in impositiciis, non multa inconcinna in consuetudine occurrent et a natura libido humana corrigetur, non a libidine natura, quod qui impositionem sequi voluerint facient contra.

Sin ab singulari quis potius proficisci volet, initium facere oportebit ab sexto casu, qui est proprius Latinus: nam eius casus litterarum discriminibus facilius reliquorum varietatem discernere poterit, quod ei habent exitus aut in A, ut hac terra, aut in E, ut hac lance, aut in I, ut hac clavi, aut in O, ut hoc caelo, aut in U, ut hoc versu. Igitur ad demonstrandas declinationes biceps via haec.

Sed quoniam ubi analogia, tria, unum quod in rebus, alterum quod in vocibus, tertium quod in utroque, duo priora simplicia, tertium duplex, animadvertendum haec quam inter se habeant rationem.

Primum ea quae sunt discrimina in rebus, partim sunt quae ad orationem non attineant, partim quae pertineant. Non pertinent ut ea quae observant in aedificiis et signis faciendis ceterisque rebus artifices, e quis vocantur aliae harmonicae, sic item aliae nominibus aliis: sed nulla harum fit in loquendo pars.

Ad orationem quae pertinent, res eae sunt quae verbis dicuntur pro portione neque a similitudine quoque vocum declinatus habent, ut Iupiter Marspiter, Iovi Marti. Haec enim genere nominum et numero et casibus similia sunt inter se, quod utraque et nomina sunt et virilia sunt et singularia et casu nominandi et dandi.

Alterum genus vocale est, in quo voces modo sunt pro portione similes, non res, ut biga bigae, nuptia nuptiae: neque enim in his res singularis subest una, cum dicitur biga quadriga, neque ab his vocibus quae declinata sunt, multitudinis significant quicquam, id quod omnia multitudinis quae declinantur ab uno, ut a merula merulae: sunt enim eius modi, ut singulari subiungatur, sic merulae duae, catulae tres, faculae quattuor.

Quare cum idem non possit subiungi, quod non dicimus biga una, quadrigae duae, nuptiae tres, sed pro eo unae bigae, binae quadrigae, trinae nuptiae, apparet non esse a biga et quadriga bigae et quadrigae, sed ut est huius ordinis una duae tres principium una, sic in hoc ordine altero unae binae

trinae principium est unae.

Tertium genus est illud duplex quod dixi, in quo et res et voces similiter pro portione dicuntur ut bonus malus, boni mali, de quorum analogia et Aristophanes et alii scripserunt. Etenim haec denique perfecta ut in oratione, illae duae simplices inchoatae analogiae, de quibus tamen separatim dicam, quod his quoque utimur in loquendo.

Sed prius de perfecta, in qua et res et voces quadam similitudine continentur, cuius genera sunt tria: unum vernaculum ac domi natum, alterum adventicium, tertium nothum ex peregrino hic natum. Vernaculum est ut sutor et pistor, sutori pistori; adventicium est ut Hectores Nestores, Hectoras Nestoras; tertium illum nothum ut Achilles et Peles.

De his primo genere multi utuntur non modo poetae, sed etiam plerique omnes qui soluta oratione loquuntur. Haec primo dicebant ut quaestorem praetorem, sic Hectorem Nestorem: itaque Ennius ait:

Hectoris natum de muro iactarier.

Accius haec in tragoediis largius a prisca consuetudine movere coepit et ad formas Graecas verborum magis revocare, a quo Valerius ait:

Accius Hectorem nollet facere, Hectora mallet.

Quod adventicia pleraque habemus Graeca, secutum ut de nothis Graecanicos quoque nominatus plurimos haberemus. Itaque ut hic alia Graeca, alia Graecanica, sic analogiae.

E quis quae hic nothae fiunt declinationes, de his aliae sunt priscae, ut Bacchides et Chrysides, aliae iuniores, ut Chrysides et Bacchides, aliae recentes, Chrysidas et Bacchidas; cum his omnibus tribus utantur nostri, maxime qui sequuntur media in loquendo offendunt minimum, quod prima parum similia videntur esse Graecis, unde sint tralata, tertia parum similia nostris.

IV.

Omnis analogiae fundamentum similitudo quaedam, ea, ut dixi, quae solet esse in rebus et in vocibus et in utroque; in quam harum partem quodque sit inferendum e cuius modi, videndum. Nam, ut dixi, neque rerum neque vocis similitudo ad has duplicis quas in loquendo quaerimus analogias verborum exprimendas separatim satis est, quod utraque parte opus est simili. Quas ad loquendum ut perducas accedere debet usus: alia enim ratio qua facias vestimentum, alia quemadmodum utare vestimento.

Usuis species videntur esse tres: una consuetudinis veteris, altera consuetudinis huius, tertia neutrae. Vetera, ut cascus cascī, surus suri; huius consuetudinis, ut albus caldus, albo caldo; neutrae, ut scala scalam, phalera phaleram. Ad quas accedere potest quarta mixta, ut amicitia inimicitia, amicitiam inimicitiam. Prima est qua usi antiqui et nos reliquimus, secunda qua nunc utimur, tertia qua utuntur poetae.

Analogia non item ea definienda quae derigitur ad naturam verborum atque illa quae ad usum loquendi. Nam prior definienda sic: analogia est verborum

similium declinatio similis, posterior sic: analogia est verborum similium declinatio similis non repugnante consuetudine communi. At quom harum duarum ad extremum additum erit hoc “ex quadam parte,” poetica analogia erit definita. Harum primam sequi debet populus, secundam omnes singuli e populo, tertiam poetae.

Haec diligentius quam apertius dicta esse arbitror, sed non obscurius quam de re simili definitiones grammaticorum sunt, ut Aristee, Aristodemi, Aristocli, item aliorum, quorum obscuritates eo minus reprehendendae, quod pleraeque definitiones re incognita propter summam brevitatem non facile perspicuntur, nisi articulatim sunt explicatae.

Quare magis apparebit, si erit aperte de singulis partibus, quid dicatur verbum, quid similitudo verbi, quid declinatio, quid similitudo declinationis non repugnante consuetudine communi, quid ex quadam parte.

Verbum dico orationis vocalis partem, quae sit indivisa et minima. Si declinationem naturalem habeat, simile verbum verbo tum quom, et re quam significat et voce qua significat et in figura e transitu declinationis parile. Declinatio est, cum ex verbo in verbum aut ex verbi discrimine, ut transeat mens, vocis commutatio fit aliqua. Similitudo declinationis, cum item ex aliqua figura in figuram transit, ut id transit, cum quo confertur.

Adiectum est “non repugnante consuetudine communi”, quod quaedam verba contra usum veterem inclinata patietur, ut passa Hortensium dicere pro hae cervices cervix, quaedam non, ut si dicas pro fauces faux. Ubi additur “ex quadam parte”, significat non esse in consuetudine in his verbis omnis partis, ut declinatum ab amo vivo amor sed non vivor.

V.

Quid videretur analogia in oratione et quas haberet species et quae de his sequendae viderentur, ut brevi potui informavi; nunc, in quibus non debeat esse ac proinde ac debeat soleat quaeri, dicam. Ea fere sunt quattuor genera: primum in id genus verbis quae non declinantur analogia non debet quaeri, ut in his nequam mox vix.

De his magis in alio quam in alio erratur verbo. Dant enim non habere casus mox et vix, nequam habere, quod dicamus hic nequam et huius nequam et huic nequam. Cum enim dicimus hic nequam et huius nequam, tum hominis eius, quem volumus ostendere esse nequam, dicimus casus, et ei proponimus tum hic nomen, cuius putamus nequitiam.

Quod vocabulum factum ut ex non et volo nolo sic ex ne et quicquam item media extrita syllaba coactum est nequam. Itaque ut eum quem putamus esse non hili dicimus nihili, sic in quo putamus esse ne quicquam dicimus nequam.

Secundo, si unum solum habent casum in voce, quod non declinentur, ut litterae omnes. Tertio, si singularis est vocabuli series neque habet cum qua comparari possit, ut esse putant caput capiti capitis capite. Quartum, si ea vocabula quattuor quae conferuntur inter se rationem non habent quam oportet, ut socer socrus, soceros socrus.

Contra in quibus debeat quaeri analogia, fere totidem gradus debent esse coniuncti: primum ut sint res, secundum ut earum sit usus, tertium uti hae res vocabula habeant, quartum ut habeant declinatus naturalis. De primo gradu, quod natura subest et multitudinis et singularis, dicimus hi asses hosce asses, hic as hunc assem; contra quod in numeris finitis multitudinis natura singularis non est, dicitur hi duo et hi tres, his duobus et his tribus.

Secundo gradu si est natura neque est usus, id genus ut sit discriminandum, ut fit in faba et id genus, quae item et ex parte et universa nominamus non enim opus fuit ut in servis * * *

FRAGMENTA

LIBER III

1. Deus autem vel dea generale nomen est omnibus * * * Varro ad Ciceronem tertio: “Ita respondeant cur dicant deos, cum de omnibus antiqui dixerint divos.”

2. Figor ambigue declinatur apud veteres tempore perfecto. Reperimus enim fictus et fixus * * * Varro ad Ciceronem tertio “fixum”.

3. Hoc nomen licet veteres Latinum negent, auctoritate tamen valet. Dicebant enim leonem masculum et feminam * * * . Leam vero Varro ad Ciceronem dicit libro III: “Sicut non est panthera et lea.”

LIBER IV

4. “Prolubium et lubidinem dici ab eo quod lubeat: unde etiam lucus Veneris Lubentinae dicatur.”

LIBER VIII

5. M. Varronis liber ad Ciceronem de Lingua Latina octavus nullam esse observationem similium docet inque omnibus paene verbis consuetudinem dominari ostendit: “Sicuti cum dicimus”, inquit, “lupus lupi, probus probi et lepus leporis, item paro paravi et lauo lavi, pungo pupugi, tundo tutudi et pingo pinxi. Cumque,” inquit, “a ceno et prandeo et poto et cenatus sum et pransus sum et potus sum dicamus, a destringor tamen et extergeor et labor destrinxi et extersi et lavi dicimus.

“Item cum dicamus ab Osco Tusco Graeco Osce Tusce Graece, a Gallo tamen et Mauro Gallice et Maurice dicimus; item a probus probe, a doctus docte, sed a rarus non dicitur rare, sed alii raro dicunt, alii rarenter.”

Idem M. Varro in eodem libro: “Sentior,” inquit, “nemo dicit et id per se nihil est, adsentior tamen fere omnes dicunt. Sisenna unus adsentio in senatu dicebat et eum postea multi secuti, neque tamen vincere consuetudinem potuerunt.” Sed idem Varro in aliis libris multa pro analogiai tuenda scribit.

LIBER IX

6. Et ubi auctoritas maiorum genus tibi non demonstraverit, quid ibi faciendum est? Scripsit Varro ad Ciceronem: “Potestatis nostrae est illis rebus dare genera, quae ex natura genus non habent.”

7 A. Nunc de generibus dicamus. Varro dicit genera dicta a generando. Quicquid enim gignit aut gignitur, hoc potest genus dici et genus facere”. Quod si verum est, nulla potest res integrum genus habere nisi masculinum et femininum.

7 B. Tractat de generibus. Varro ait “genera tantum illa esse quae generant: illa proprie dicuntur genera.” Quodsi sequemur auctoritatem ipsius, non erunt genera nisi duo, masculinum et femininum. Nulla enim genera creare possunt nisi haec duo.

8. Ostrea primae declinationis fuerit, sicut Musa, feminino genere declinabitur, ut ad animal referamus; si ad testam, ostreum dicendum est

neutro genere et ad secundam declinationem, ut sit huius ostrei, huic ostreo, quia dicit Varro “nullam rem animalem neutro genere declinari.”

9. Ait Plinius Secundus secutus Varronem: “Quando dubitamus principale genus, redeamus ad diminutionem, et ex diminutivo cognoscimus principale genus. Puta arbor ignoro cuius generis sit: fac diminutivum arbuscula, ecce hinc intellegis et principale genus quale sit. Item si dicas columna, cuius generis est? facis inde diminutivum, id est columella, et inde intellegis quoniam principale feminini generis est.”

10. “Hypocorismata semper generibus suis unde oriuntur consonant, pauca dissonant, velut haec rana hic ranunculus, hic unguis haec ungula, hoc glandium haec glandula, hic panis hic pastillus et hoc pastillum,” ut Varro dixit: “haec beta hic betaceus, haec malva hic malvaceus, hoc pistrinum haec pistrilla, ut Terentius in Adelphis, hic ensis haec ensicula et hic ensiculus: sic in Rudente Plautus.”

11. Dies communis generis est. Qui masculino genere dicendum putaverunt, has causas reddiderunt, quod dies festos auctores dixerunt, non festas, et quartum et quintum Kalendas, non quartam nec quintam, et cum hodie dicimus, nihil aliud quam hoc die intelligitur. Qui vero feminino, catholico utuntur, quod ablativo casu E non nisi producta finiatur, et quod deminutio eius diecula sit, non dieculus, ut ait, Terentius:

Quod tibi addo dieculam.

Varro autem distinxit, ut masculino genere unius diei cursum significaret, feminino autem temporis spatium; quod nemo servavit.

12. Catinus masculino genere dicitur * * * et hinc deminutive catillus fit * * * Sed Varro ad Ciceronem XI “catinuli” dixit, non catilli.

13. Naevus generis neutri, sed Varro ad Ciceronem “hic naevus”.

14 A. Antiquissimi tamen et hic gausapes et haec gausapa et hoc gausape et plurale neutri haec gausapa quasi a nominativo hoc gausapum protulisse inveniuntur * * *. Varro vero de Lingua Latina ait, “talìa ex Graeco sumpta ex masculino in femininum transire et A littera finiri: Ho kochlias haec cochlea, ho chartes haec charta, ho gausapes haec gausapa”.

14 B. Varro autem ait “vocabula ex Graeco sumpta, si suum genus non retineant, ex masculino in femininum Latine transire et A littera terminari velut kochlias cochlea, Hermes herma, chartes charta, ergo gausape gausapa”.

14 C. Margarita feminini generis est, quia Graeca nomina -es terminata in A transeunt et fiunt feminina, ut ho chartes haec charta, margarites margarita, aut communia, ut athletes athleta. Ergo neutraliter hoc margaritum dicere uitiosum est; et tamen multi dixerunt, ut Valgius * * * et Varro Epistularum VIII “margaritum unum, margarita plura.” Sed idem Varro saepe et alii plures margarita feminine dixerunt; in genetivo tamen plurali non nisi feminino genere margaritarum.

15. VAS terminata et SIS faciunt genitivo et DIS, hoc vas huius vasis; utrumque Varro ait de Lingua Latina: hic vas huius vadis.

16. VIS et ipsa tertiae sunt declinationis et similem nominativo faciunt

genetivum, hic civis huius civis, haec vis huius vis et plurali hae vis, sicut Lucretius et Varro: nam hae vires numero semper plurali declinantur.

17. M. Varronem et P. Nigidium, viros Romani generis doctissimos, comperimus non aliter elocutos esse et scripsisse quam senatus et domus et fluctus, qui est patrius casus ab eo quod est senatus, domus, fluctus; huic senatui, domui, fluctui, ceteraque is consimilia pariter dixisse.

18. Amni Maro,

Secundo defluit amni.

Ubi Plinius eodem libro “Ab antiquis” inquit “quos Varro reprehendit, observatio omnis illa damnata est, non quidem in totum. Dicimus enim,” inquit, “ab hoc canali siti tussi febri. Maiore tamen ex parte forma mutata est. Ab hoc enim cane orbe carbone turre falce igne ueste fine monte fonte ponte strigile tegete ave asse axe nave classe dicimus.”

19. Quem Plinius ad eundem XI “rure ordinatum arbustum” dixisse laudat.

20. Fonteis: “Quorum nominum genetivi pluralis ante UM syllabam I litteram merebuntur, accusativus,” inquit Plinius, “per EIS loquetur, montium monteis; licet Varro,” inquit, “exemplis hanc regulam confutare temptarit istius modi, falcium falces, non falceis facit, nec has merceis, nec hos axeis lintreis ventreis stirpeis urbeis corbeis vecteis menteis. Et tamen manus dat praemissae regulae ridicule, ut exceptis his nominibus valeat regula.”

21. Poematorum et in II et in III idem Varro adsidue dicit et his poematis, tam quam nominativo hoc poematum sit et non hoc poema. Nam et ad Ciceronem XI, horum poematorum et his poematis oportere dici.

22. Git: Varro ad Ciceronem XI per omnes casus id nomen ire debere commemorat; vulgo autem hoc gitti dicunt.

LIBER XIII

23. Palpetras per T Varro ad Ciceronem XIII dixit. Sed Fabianus de Animalibus primo palpebras per B. Alii dicunt palpetras genas, palpebras autem ipsos pilos.

24. Oxo: “Varro ad Ciceronem XIII olivo et oxo putat fieri,” inquit Plinius Sermonis Dubii libro VI.

LIBER XVIII

25. Indiscriminatim, indifferenter. Varro de Lingua Latina lib. XVIII: “Quibus nos in hoc libro, proinde ut nihil intersit, utemur indiscriminatim, promisce.”

LIBER XXII

26. Rure Terentius in Eunucho:

Ex meo propinquo rure hoc capio commodi.

Itaque et Varro ad Ciceronem XXII “rure veni.”

LIBER XXIII

27. Varro ad Ciceronem in libro XXIII: “ingluvies tori,” inquit, “sunt circa gulam, qui propter pinguedinem fiunt atque interiectas habent rugas.” Sed nunc pro gula positum.

28. Cum in disciplinas dialecticas induci atque imbui vellemus, necessus

fuit adire atque cognoscere quas vocant dialectici eisagogas. Tum, quia in primo peri axiomaon discendum, quae M. Varro alias profata, alias proloquia appellat, Commentarium de Proloquiis L. Aelii, docti hominis, qui magister Varronis fuit, studiose quaesivimus eumque in Pacis Bibliotheca repertum legimus. Sed in eo nihil edocenter neque ad instituendum explanate scriptum est, fecisseque videtur eum librum Aelius sui magis admonendi quam aliorum docendi gratia.

Redimus igitur necessario ad Graecos libros. Ex quibus accepimus axioma esse his verbis definitum: lekton autoteles apophanton hoson eph'hautoi. Hoc ego supersedi vertere, quia novis et inconditis vocibus utendum fuit, quas pati aures per insolentiam vix possent. Sed M. Varro in libro de Lingua Latina ad Ciceronem quarto vicesimo expeditissime ita finit: "Proloquium est sententia in qua nihil desideratur."

Erit autem planius quid istud sit, si exemplum eius dixerimus. Axioma igitur, sive id proloquium dicere placet, huiuscemodi est: Hannibal Poenus fuit; Scipio Numantiam delevit; Milo caedis damnatus est; Neque bonum est voluptas neque malum; et omnino quicquid ita dicitur plena atque perfecta verborum sententia, ut id necesse sit aut verum aut falsum esse, id a dialecticis axioma appellatum est, a M. Varrone, sicuti dixi, proloquium, a M. autem Cicerone pronuntiatum, quo ille tamen vocabulo tantisper uti se adtestatus est, "quoad melius," inquit, "invenero."

Sed quod Graeci synemmenon axioma dicunt, id alii nostrorum adiunctum, alii conexum dixerunt. Id conexum tale est: Si Plato ambulat, Plato movetur; Si dies est, so super terras est. Item quod illi sympeplegmenon, nos vel coniunctum vel copulatum dicimus, quod est eiusdemmodi: P. Scipio, Pauli filius, et bis consul fuit et triumphavit et censura functus est et collega in censura L. Mummi fuit. In omni autem coniuncto si unum est mendacium, etiamsi cetera vera sunt, totum esse mendacium dicitur. Nam si ad ea omnia quae de Scipione illo vera dixi addidero Et Hannibalem in Africa superavit, quod est falsum, universa quoque illa quae coniuncte dicta sunt, propter hoc unum quod falsum accesserit, quia simul dicentur, vera non erunt.

Est item aliud quod Graeci diezeugmenon axioma, nos disiunctum dicimus. Id huiuscemodi est: Aut malum est voluptas aut bonum, aut neque bonum neque malum est. Omnia autem quae disiunguntur pugnancia esse inter sese oportet, eorumque opposita, quae antikeimena Graeci dicunt, ea quoque ipsa inter se adversa esse. Ex omnibus quae disiunguntur unum esse verum debet, falsa cetera. Quod si aut nihil omnium verum aut omnia plurave quam unum vera erunt, aut quae disiuncta sunt non pugnabunt, aut quae opposita eorum sunt contraria inter sese non erunt, tunc id disiunctum mendacium est et appellatur paradizeugmenon, sicuti hoc est, in quo quae opposita non sunt contraria: Aut curris aut ambulas aut stas. Nam ipsa quidem inter se adversa sunt, sed opposita eorum non pugnant: non ambulare enim et non stare et non currere contraria inter sese non sunt, quoniam contraria ea dicuntur quae simul vera esse non queunt; possis simul eodemque tempore neque ambulare neque

stare neque currere.

29. Excipiuntur haurio hausi (invenitur tamen etiam haurivi uel haurii; Varro in XXIII ad Ciceronem: “Cum indidem haurierint”), saepio saepsi * *

* .

The Dual Text



The site of the Battle of Pharsalus, a decisive conflict in Caesar's Civil War, which took place on 9 August 48 BC at Pharsalus in central Greece. Varro supported Pompey and was present at the battle; however, two pardons were granted by Caesar to Varro and he escaped the penalties of being on the losing side.

DUAL LATIN AND ENGLISH TEXT



Translated by William Davis Hooper and Revised by Harrison Boyd Ash

In this section, readers can view a section by section text of Varro's *On Agriculture*, alternating between the original Latin and the Loeb Classical Library translation.

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BOOK I

I.

Otium si essem consecutus, Fundania, commodius tibi haec scriberem, quae nunc, ut potero, exponam cogitans esse properandum, quod, ut dicitur, si est homo bulla, eo magis senex. Annus enim octogesimus admonet me ut sarcinas conligam, antequam proficiscar e vita. Quare, quoniam emisti fundum, quem bene colendo fructuosum cum facere velis, meque ut id mihi habeam curare roges, experiar; et non solum, ut ipse quoad vivam, quid fieri oporteat ut te moneam, sed etiam post mortem. Neque patiar Sibyllam non solum cecinisse quae, dum viveret, prodessent hominibus, sed etiam quae cum perisset ipsa, et id etiam ignotissimis quoque hominibus; ad cuius libros tot annis post publice solemus redire, cum desideramus, quid faciendum sit nobis ex aliquo portento: me, ne dum vivo quidem, necessariis meis quod prosit facere. Quocirca scribam tibi tres libros indices, ad quos revertare, siqua in re quaeres, quem ad modum quidque te in colendo oporteat facere. Et quoniam, ut aiunt, dei facientes adiuvant, prius invocabo eos, nec, ut Homerus et Ennius, Musas, sed duodecim deos Consentis; neque tamen eos urbanos, quorum imagines ad forum auratae stant, sex mares et feminae totidem, sed illos XII deos, qui maxime agricularum duces sunt. Primum, qui omnis fructus agri culturae caelo et terra continent, Iovem et Tellurem: itaque, quod ii parentes, magni dicuntur, Iuppiter pater appellatur, Tellus terra mater. Secundo Solem et Lunam, quorum tempora observantur, cum quaedam seruntur et conduntur. Tertio Cererem et Liberum, quod horum fructus maxime necessari ad victum: ab his enim cibus et potio venit e fundo. Quarto Robigum ac Floram, quibus propitiis neque robigo frumenta atque arbores corrumpit, neque non tempestive florent. Itaque publice Robigo feriae Robigalia, Florae ludi Floralia instituti.

[1.1] Had I possessed the leisure, Fundania, I should write in a more serviceable form what now I must set forth as I can, reflecting that I must hasten; for if man is a bubble, as the proverb has it, all the more so is an old man. For my eightieth year admonishes me to gather up my pack before I set forth from life. [2] Wherefore, since you have bought an estate and wish to make it profitable by good cultivation, and ask that I concern myself with the matter, I will make the attempt; and in such wise as to advise you with regard to the proper practice not only while I live but even after my death. [3] And I cannot allow the Sibyl to have uttered prophecies which benefited mankind not only while she lived, but even after she had passed away, and that too people whom she never knew — for so many years later we are wont officially to consult her books when we desire to know what we should do after some portent — and not do something, even while I am alive, to help my friends and kinsfolk. [4] Therefore I shall write for you three handbooks to which you may turn

whenever you wish to know, in a given case, how you ought to proceed in farming. And since, as told, the gods help those who call upon them, I will first invoke them — not the Muses, as Homer and Ennius do, but the twelve councillor-gods; and I do not mean those urban gods, whose images stand around the forum, bedecked with gold, six male and a like number female, but those twelve gods who are the special patrons of husbandmen. [5] First, then, I invoke Jupiter and Tellus, who, by means of the sky and the earth, embrace all the fruits of agriculture; and hence, as we are told that they are the universal parents, Jupiter is called “the Father,” and Tellus is called “Mother Earth.” And second, Sol and Luna, whose courses are watched in all matters of planting and harvesting. Third, Ceres and Liber, because their fruits are most necessary for life; for it is by their favour that food and drink come from the farm. [6] Fourth, Robigus and Flora; for when they are propitious the rust will not harm the grain and the trees, and they will not fail to bloom in their season; wherefore, in honour of Robigus has been established the solemn feast of the Robigalia, and in honour of Flora the games called the Floralia.

Item adveneror Minervam et Venerem, quarum unius procuratio oliveti, alterius hortorum; quo nomine rustica Vinalia instituta. Nec non etiam precor Lympham ac Bonum Eventum, quoniam sine aqua omnis arida ac misera agricultura, sine successu ac bono eventu frustratio est, non cultura. Iis igitur deis ad venerationem advocatis ego referam sermones eos quos de agri cultura habuimus nuper, ex quibus quid te facere oporteat animadvertere poteris. in quis quae non inerunt et quaeres, indicabo a quibus scriptoribus repetas et Graecis et nostris.

Qui Graece scripserunt dispersim alius de alia re, sunt plus quinquaginta. Hi sunt, quos tu habere in consilio poteris, cum quid consulere voles, Hieron Siculus et Attalus Philometor: de philosophis Democritus physicus, Xenophon Socraticus, Aristoteles et Theophrastus peripatetici, Archytas Pythagoreus: item Amphilocho Atheniensis, Anaxipolis Thasius, Apollodorus Lemnius, Aristophanes Mallotes, Antigonos Cymaeus, Agathocles Chius, Apollonius Pergamenus, Aristandros Atheniensis, Bacchius Milesius, Bion Soleus, Chaeresteus et Chaereas Athenienses, Diodorus Prieneus, Dion Colophonius, Diophanes Nicaeensis, Epigenes Rhodios, Euagon Thasius, Euphronii duo, unus Atheniensis, alter Amphipolites, Hegesias Maronites, Menandri duo, unus Prieneus, alter Heracleotes, Nicesius Maronites, Pythion Rhodius. De reliquis, quorum quae fuerit patria non accepi, sunt Androtion, Aeschion, Aristomenes, Athenagoras, Crates, Dadis, Dionysios, Euphiton, Euphorion, Eubulus, Lysimachus, Mnaseas, Menestratus, Plentiphanes, Persis, Theophilus. Hi quos dixi omnes soluta oratione scripserunt; easdem res etiam quidam versibus, ut Hesiodus Ascræus, Menecrates Ephesius. Hos nobilitate Mago Carthaginensis praeteriit, poenica lingua qui res dispersas comprehendit libris XXII, quos Cassius Dionysius Uticensis vertit libris XX ac Graeca lingua Sextilio praetori misit: in quae volumina de Graecis libris eorum quos

dixi adiecit non pauca et de Magonis dempsit instar librorum VIII. Hosce ipsos utiliter ad VI libros redegit Diophanes in Bithynia et misit Deiotaro regi. Quo brevius de ea re conor tribus libris exponere, uno de agri cultura, altero de re pecuaria, tertio de villaticis pastionibus, hoc libro circumcisis rebus, quae non arbitror pertinere ad agri culturam. Itaque prius ostendam, quae secerni oporteat ab ea, tum de his rebus dicam sequens naturales divisiones. Ea erunt ex radicibus trinis, et quae ipse in meis fundis colendo animadverti, et quae legi, et quae a peritis audii.

Likewise I beseech Minerva and Venus, of whom the one protects the oliveyard and the other the garden; and in her honour the rustic Vinalia has been established. And I shall not fail to pray also to Lympha and Bonus Eventus, since without moisture all tilling of the ground is parched and barren, and without success and “good issue” it is not tillage but vexation. [7] Having now duly invoked these divinities, I shall relate the conversations which we had recently about agriculture, from which you may learn what you ought to do; and if matters in which you are interested are not treated, I shall indicate the writers, both Greek and Roman, from whom you may learn them.

Those who have written various separate treatises in Greek, one on one subject, another on another, are more than fifty in number. [8] The following are those whom you can call to your aid when you wish to consider any point: Hiero of Sicily and Attalus Philometor; of the philosophers, Democritus the naturalist, Xenophon the Socratic, Aristotle and Theophrastus the Peripatetics, Archytas the Pythagorean, and likewise Amphilocheus of Athens, Anaxipolis of Thasos, Apollodorus of Lemnos, Aristophanes of Mallos, Antigonus of Cyme, Agathocles of Chios, Apollonius of Pergamum, Aristandrus of Athens, Bacchius of Miletus, Bion of Soli, Chaerestus and Chaereas of Athens, Diodorus of Priene, Dion of Colophon, Diophanes of Nicaea, Epigenes of Rhodes, Euagon of Thasos, the two Euphronii, one of Athens and the other of Amphipolis, Hegesias of Maronea, the two Menanders, one of Priene and the other of Heraclea, Nicesius of Maronea, and Pythion of Rhodes. [9] Among other writers, whose birthplace I have not learned, are: Androtion, Aeschrius, Aristomenes, Athenagoras, Crates, Dadis, Dionysius, Euphiton, Euphorion, Eubulus, Lysimachus, Mnaseas, Menestratus, Plentiphanes, Persis, Theophilus. All these whom I have named are prose writers; others have treated the same subjects in verse, as Hesiod of Ascra and Menecrates of Ephesus. [10] All these are surpassed in reputation by Mago of Carthage, who gathered into twenty-eight books, written in the Punic tongue, the subjects they had dealt with separately. These Cassius Dionysius of Utica translated into Greek and published in twenty books, dedicated to the praetor Sextilius. In these volumes he added not a little from the Greek writers whom I have named, taking from Mago’s writings an amount equivalent to eight books. Diophanes, in Bithynia, further abridged these in convenient form into six books, dedicated to King Deiotarus. [11] I shall attempt to be even briefer and

treat the subject in three books, one on agriculture proper, the second on animal husbandry, the third on the husbandry of the steading, omitting in this book all subjects which I do not think have a bearing on agriculture. And so, after first showing what matter should be omitted, I shall treat of the subject, following the natural divisions. My remarks will be derived from three sources: what I have myself observed by practice on my own land, what I have read, and what I have heard from experts.

II.

Sementivis feriis in aedem Telluris veneram rogatus ab aeditumo, ut dicere didicimus a patribus nostris, ut corrigimur a recentibus urbanis, ab aedituo. Offendi ibi C. Fundanium, socerum meum, et C. Agrium equitem R. Socraticum et P. Agrasium publicanum spectantes in pariete pictam Italiam. Quid vos hic? inquam, num feriae sementivae otiosos huc adduxerunt, ut patres et avos solebant nostros? Nos vero, inquit Agrius, ut arbitrator, eadem causa quae te, rogatio aeditumi. Itaque si ita est, ut annuis, morere oportet nobiscum, dum ille revertatur. Nam accersitus ab aedile, cuius procuratio huius templi est, nondum rediit et nos uti expectaremus se reliquit qui rogaret. Voltis igitur interea vetus proverbium, quod est ‘Romanus sedendo vincit’, usurpemus, dum ille venit?

Sane, inquit Agrius, et simul cogitans portam itineri dici longissimam esse ad subsellia sequentibus nobis procedit.

Cum consedissemus, Agrasius, Vos, qui multas perambulastis terras, ecquam cultiorem Italia vidistis? inquit. Ego vero, Agrius, nullam arbitrator esse quae tam tota sit culta. Primum cum orbis terrae divisus sit in duas partes ab Eratosthene maxime secundum naturam, ad meridiem versus et ad septemtriones, et sine dubio quoniam salubrior pars septemtrionalis est quam meridiana, et quae salubriora illa fructuosiora, dicendum utique Italiam magis etiam fuisse opportunam ad colendum quam Asiam, primum quod est in Europa, secundo quod haec temperatior pars quam interior. Nam intus paene sempiternae hiemes, neque mirum, quod sunt regiones inter circulum septemtrionalem et inter cardinem caeli, ubi sol etiam sex mensibus continuus non videtur. Itaque in oceano in ea parte ne navigari quidem posse dicunt propter mare congelatum. Fundanius, Em ubi tu quicquam nasci putes posse aut coli natum. Verum enim est illud Pacuvi, sol si perpetuo sit aut nox, flammeo vapore aut frigore terrae fructos omnis interire. Ego hic, ubi nox et dies modice redit et abit, tamen aestivo die, si non diffinderem meo insiticio somno meridie, vivere non possum. Illic in semenstri die aut nocte quem ad modum quicquam seri aut alescere aut meti possit? Contra quid in Italia utensile non modo non nascitur, sed etiam non egregium fit? Quod far conferam Campano? Quod triticum Apulo? Quod vinum Falerno? Quod oleum Venafro? Non arboribus consita Italia, ut tota pomarium videatur?

[2.1] On the festival of the Sementivae I had gone to the temple of Tellus at the invitation of the aeditumnus (sacristan), as we have been taught by our fathers to call him, or of the aedituus, as we are being set right on the word by our modern purists. I found there Gaius Fundanius, my father-in-law, Gaius Agrius, a Roman knight of the Socratic school, and Publius Agrasius, the tax-farmer, examining a map of Italy painted on the wall. "What are you doing here?" said I. "Has the festival of the Sementivae brought you here to spend your holiday, as it used to bring our fathers and grandfathers?" [2] "I take it," replied Agrius, "that the same reason brought us which brought you — the invitation of the sacristan. If I am correct, as your nod implies, you will have to await with us his return; he was summoned by the aedile who has supervision of this temple, and has not yet returned; and he left a man to ask us to wait for him. Do you wish us then meanwhile to follow the old proverb, 'the Roman wins by sitting still,' until he returns?" "By all means," replied Agrius; and reflecting that the longest part of the journey is said to be the passing of the gate, he walked to a bench, with us in his train.

[3] When we had taken our seats Agrasius opened the conversation: "You have all travelled through many lands; have you seen any land more fully cultivated than Italy?" "For my part," replied Agrius, "I think there is none which is so wholly under cultivation. Consider first: Eratosthenes, following a most natural division, has divided the earth into two parts, [4] one to the south and the other to the north; and since the northern part is undoubtedly more healthful than the southern, while the part which is more healthful is more fruitful, we must agree that Italy at least was more suited to cultivation than Asia. In the first place, it is in Europe; and in the next place, this part of Europe has a more temperate climate than we find farther inland. For the winter is almost continuous in the interior, and no wonder, since its lands lie between the arctic circle and the pole, where the sun is not visible for six months at a time; wherefore we are told that even navigation in the ocean is not possible in that region because of the frozen sea." [5] "Well," remarked Fundanius, "do you think that anything can germinate in such a land, or mature if it does germinate? That was a true saying of Pacuvius, that if either day or night be uninterrupted, all the fruits of the earth perish, from the fiery vapour or from the cold. For my part, I could not live even here, where the night and the day alternate at moderate intervals, if I did not break the summer day with my regular midday nap; [6] but there, where the day and the night are each six months long, how can anything be planted, or grow, or be harvested? On the other hand, what useful product is there which not only does not grow in Italy, but even grow to perfection? What spelt shall I compare to the Campanian, what wheat to the Apulian, what wine to the Falernian, what oil to the Venafran? Is not Italy so covered with trees that the whole land seems to be an orchard?"

An Phrygia magis vitibus cooperta, quam Homerus appellat ampeloessan,

quam haec? Aut tritico Argos, quod idem poeta polupuron? In qua terra iugerum unum denos et quinos denos culleos fert vini, quot quaedam in Italia regiones? An non M. Cato scribit in libro Originum sic: ‘ager Gallicus Romanus vocatur, qui viritim cis Ariminum datus est ultra agrum Picentium. In eo agro aliquotfariam in singula iugera dena cullea vini fiunt’? Nonne item in agro Faventino, a quo ibi trecenariae appellantur vites, quod iugerum trecentas amphoras reddat? Simul aspicit me, Certe, inquit, Libo Marcius, praefectus fabrum tuos, in fundo suo Faventiae hanc multitudinem dicebat suas reddere vites. Duo in primis spectasse videntur Italici homines colendo, possentne fructus pro impensa ac labore redire et utrum saluber locus esset an non. Quorum si alterutrum decolat et nihilo minus quis vult colere, mente est captus adque adgnatos et gentiles est deducendus. Nemo enim sanus debet velle impensam ac sumptum facere in cultura, si videt non posse refici, nec si potest reficere fructus, si videt eos fore ut pestilentia dispereant. Sed, opinor, qui haec commodius ostendere possint adsunt. Nam C. Licinium Stolonem et Cn. Tremelium Scrofam video venire: unum, cuius maiores de modo agri legem tulerunt (nam Stolonis illa lex, quae vetat plus D iugera habere civem R.), et qui propter diligentiam culturae Stolonum confirmavit cognomen, quod nullus in eius fundo reperiri poterat stolo, quod effodiebat circum arbores e radicibus quae nascerentur e solo, quos stolones appellabant. Eiusdem gentis C. Licinius, tr. pl. cum esset, post reges exactos annis CCCLXV primus populum ad leges accipiendas in septem iugera forensia e comitio eduxit. Alterum collegam tuum, viginti virum qui fuit ad agros dividendos Campanos, video huc venire, Cn. Tremelium Scrofam, virum omnibus virtutibus politum, qui de agri cultura Romanus peritissimus existimatur. An non iure? inquam. Fundi enim eius propter culturam iucundiore spectaculo sunt multis, quam regie polita aedificia aliorum, cum huius spectatum veniant villas, non, ut apud Lucullum, ut videant pinacothecas, sed oporothecas. Huiusce, inquam, pomarii summa sacra via, ubi poma veneunt contra aurum, imago.

Illi interea ad nos, et Stolo, Num cena comessa, inquit, venimus? Nam non L. videmus Fundilium, qui nos advocavit. Bono animo este, inquit Agrius. Nam non modo ovom illud sublatum est, quod ludis circensibus novissimi curriculi finem facit quadrigis, sed ne illud quidem ovom vidimus, quod in cenali pompa solet esse primum. Itaque dum id nobiscum una videatis ac venit aeditumus, docete nos, agri cultura quam summam habeat, utilitatemne an voluptatem an utrumque. Ad te enim rudem esse agri culturae nunc, olim ad Stolonem fuisse dicunt.

[7] Is that Phrygia, which Homer calls ‘the vine-clad,’ more covered with vines than this land, or Argos, which the same poet calls ‘the rich in corn,’^o more covered with wheat? In what land does one iugerum bear ten and fifteen cullei of wine, as do some sections of Italy? Or does not Marcus Cato use this language in his Origines? ‘The land lying this side of Ariminum and beyond the district of Picenum, which was allotted to colonists, is called Gallo-

Roman. In that district, at several places, ten cullei of wine are produced to the iugerum.' Is not the same true of the district of Faventia? The vines there are called by this writer *trecenariae*, from the fact that the iugerum yields three hundred amphorae." And he added, turning to me, "At least your friend, Marcius Libo, the engineer officer, used to tell me that the vines on his estate at Faventia bore this quantity. [8] The Italian seems to have had two things particularly in view in his farming: whether the land would yield a fair return for the investment in money and labour, and whether the situation was healthful or not. If either of these elements is lacking, any man who, in spite of that fact, desires to farm has lost his wits, and should be taken in charge by his kinsmen and family. For no sane man should be willing to undergo the expense and outlay of cultivation if he sees that it cannot be recouped; or, supposing that he can raise a crop, if he sees that it will be destroyed by the unwholesomeness of the situation. [9] But, I think, there are some gentlemen present who can speak with more authority on these subjects; for I see Gaius Licinius Stolo and Gnaeus Tremelius Scrofa approaching, one of them a man whose ancestors originated the bill to regulate the holding of land (for that law which forbids a Roman citizen to hold more than 500 iugera was proposed by a Stolo), and who has proved the appropriateness of the family name by his diligence in farming; he used to dig around his trees so thoroughly that there could not be found on his farm a single one of those suckers which spring up from the roots and are called *stolones*. Of the same farm was that Gaius Licinius who, when he was tribune of the plebs, 365 years after the expulsion of the kings, was the first to lead people, for the hearing of laws, from the *comitium* into the "farm" of the forum. [10] The other whom I see coming is your colleague, who was of the Commission of Twenty for parcelling the Campanian lands, Gnaeus Tremelius Scrofa, a man distinguished by all virtues, who is esteemed the Roman most skilled in agriculture." "And justly so," I exclaimed. "For his estates, because of their high cultivation, are a more pleasing sight to many than the country seats of others, furnished in a princely style. When people come to inspect his farmsteads, it is not to see collections of pictures, as at Lucullus's, but collections of fruit. The top of the Via Sacra," I added, "where fruit brings its weight in gold, is a very picture of his orchard."

[11] While we were speaking they came up, and Stolo inquired: "We haven't arrived too late for dinner? For I do not see Lucius Fundilius, our host." "Do not be alarmed," replied Agrius, "for not only has that egg which shows the last lap of the chariot race at the games in the circus not been taken down, but we have not even seen that other egg which usually heads the procession at dinner. [12] And so, while you and we are waiting to see the latter, and our sacristan is returning, tell us what end agriculture has in view, profit, or pleasure, or both; for we are told that you are now the past-master of agriculture, and that Stolo formerly was."

Scrofa, Prius, inquit, discernendum, utrum quae serantur in agro, ea sola sint in cultura, an etiam quae inducantur in rura, ut oves et armenta. Video enim, qui de agri cultura scripserunt et Poenice et Graece et Latine, latius vagatos, quam oportuerit. Ego vero, inquit Stolo, eos non in omni re imitandos arbitror et eo melius fecisse quosdam, qui minore pomerio finierunt exclusis partibus quae non pertinent ad hanc rem. Quare tota pastio, quae coniungitur a plerisque cum agri cultura, magis ad pastorem quam ad agricolam pertinere videtur. Quocirca principes qui utrique rei praeponuntur vocabulis quoque sunt diversi, quod unus vocatur vilicus, alter magister pecoris. Vilicus agri colendi causa constitutus atque appellatus a villa, quod ab eo in eam convehuntur fructus et evehuntur, cum veneunt. A quo rustici etiam nunc quoque viam veham appellant propter vecturas et vellam, non villam, quo vehunt et unde vehunt. Item dicuntur qui vecturis vivunt velaturam facere. Certe, inquit Fundanius, aliut pastio et aliut agri cultura, sed adfinis et ut dextra tibia alia quam sinistra, ita ut tamen sit quodam modo coniuncta, quod est altera eiusdem carminis modorum incentiva, altera succentiva. Et quidem licet adicias, inquam, pastorum vitam esse incentivam, agricolarum succentivam auctore doctissimo homine Dicaearcho, qui Graeciae vita qualis fuerit ab initio nobis ita ostendit, ut superioribus temporibus fuisse doceat, cum homines pastoriciam vitam agerent neque scirent etiam arare terram aut serere arbores aut putare; ab iis inferiore gradu aetatis susceptam agri culturam. Quocirca ea succinit pastorali, quod est inferior, ut tibia sinistra a dextrae foraminibus. Agrius, Tu, inquit, tibicen non solum adimis domino pecus, sed etiam servis peculium, quibus domini dant ut pascant, atque etiam leges colonicas tollis, in quibus scribimus, colonus in agro surculario ne capra natum pascat: quas etiam astrologia in caelum recepit, non longe ab tauro. Cui Fundanius, Vide, inquit, ne, Agri, istuc sit ab hoc, cum in legibus etiam scribatur ‘pecus quoddam’. Quaedam enim pecudes culturae sunt inimicae ac veneno, ut istae, quas dixisti, caprae. Eae enim omnia novella sata carpando corrumpunt, non minimum vites atque oleas. Itaque propterea institutum diversa de causa ut ex caprino genere ad alii dei aram hostia adduceretur, ad alii non sacrificaretur, cum ab eodem odio alter videre nollet, alter etiam videre pereuntem vellet. Sic factum ut Libero patri, repertori vitis, hirci immolarentur, proinde ut capite darent poenas; contra ut Minervae caprini generis nihil immolarent propter oleam, quod eam quam laeserit fieri dicunt sterilem: eius enim salivam esse fructuis venenum: hoc nomine etiam Athenis in arcem non inigi, praeterquam semel ad necessarium sacrificium, ne arbor olea, quae primum dicitur ibi nata, a capra tangi possit. Nec ullae, inquam, pecudes agri culturae sunt propriae, nisi quae agrum opere, quo cultior sit, adiuvere, ut eae quae iunctae arare possunt.

“First,” remarked Scrofa, “we should determine whether we are to include under agriculture only things planted, or also other things, such as sheep and cattle, which are brought on to the land. [13] For I observe that those who have written on agriculture, whether in Punic, or Greek, or Latin, have wandered

too far from the subject.” “For my part,” replied Stolo, “I do not think that they are to be imitated in every respect, but that certain of them have acted wisely in confining the subject to narrower limits, and excluding matters which do not bear directly on this topic. Thus the whole subject of grazing, which many writers include under agriculture, seems to me to concern the herdsman rather than the farmer. [14] For that reason the persons who are placed in charge of the two occupations have different names, one being called vilicus, and the other magister pecoris. The vilicus is appointed for the purpose of tilling the ground, and the name is derived from villa, the place into which the crops are hauled (vehuntur), and out of which they are hauled by him when they are sold. For this reason the peasants even now call a road veba, because of the hauling; and they call the place to which and from which they haul vella and not villa. In the same way, those who make a living by hauling are said *facere velaturam*.” [15] “Certainly,” said Fundanius, “grazing and agriculture are different things, though akin; just as the right pipe of the tibia is different from the left, but still in a way united, inasmuch as the one is the treble, while the other plays the accompaniment of the same air.” [16] “You may even add this,” said I, “that the shepherd’s life is the treble, and the farmer’s plays the accompaniment, if we may trust that most learned man, Dicaearchus. In his sketch of Greek life from the earliest times, he says that in the primitive period, when people led a pastoral life, they were ignorant even of ploughing, of planting trees, and of pruning, and that agriculture was adopted by them only at a later period. Wherefore the art of agriculture ‘accompanies’ the pastoral because it is subordinate, as the left pipe is to the stops of the right.” [17] “You and your piping,” retorted Agrius, “are not only robbing the master of his flock and the slaves of their peculium — the grazing which their master allows them — but you are even abrogating the homestead laws, among which we find one reciting that the shepherd may not graze a young orchard with the offspring of the she-goat, a race which astrology, too, has placed in the heavens, not far from the Bull.” [18] “Be careful, Agrius,” interrupted Fundanius, “that your citation cannot be wide of the mark; for it is also written in the law, ‘a certain kind of flock.’ For certain kinds of animals are the foes of plants, and even poisonous, such as the goats of which you spoke; for they destroy all young plants by their browsing, and especially vines and olives. [19] Accordingly there arose a custom, from opposite reasons, that a victim from the goat family might be led to the altar of one god, but might not be sacrificed on the altar of another; since, because of the same hatred, the one was not willing to see a goat, while the other was pleased to see him die. So it was that he-goats were offered to father Bacchus, the discoverer of the vine, so that they might pay with their lives for the injuries they do him; while, on the other hand, no member of the goat family was sacrificed to Minerva on account of the olive, because it is said that any olive plant which they bite becomes sterile; for their spittle is poisonous to its fruit. [20] For this reason, also, they are not driven into the acropolis at Athens

except once a year, for a necessary sacrifice — to avoid the danger of having the olive tree, which is said to have originated there, touched by a she-goat.” “Cattle are not properly included in a discussion on agriculture,” said I, “except those which enhance the cultivation of the land by their labour, such as those which can plough under the yoke.”

Agrasius, Si istuc ita est, inquit, quo modo pecus removeri potest ab agro, cum stercus, quod plurimum prodest, greges pecorum ministrent? Sic, inquit Agrius, venalium greges dicemus agri culturam esse, si propter istam rem habendum statuerimus. Sed error hinc, quod pecus in agro esse potest et fructus in eo agro ferre, quod non sequendum. Nam sic etiam res aliae diversae ab agro erunt adsumendae, ut si habet plures in fundo textores atque institutos histonas, sic alios artifices.

Scrofa, Diiungamus igitur, inquit, pastionem a cultura, et siquis quid vult aliud. Anne ego, inquam, sequar Sasernarum patris et filii libros ac magis putem pertinere, figilinas quem ad modum exerceri oporteat, quam argentifodinas aut alia metalla, quae sine dubio in aliquo agro fiunt? Sed ut neque lapidicinae neque harenariae ad agri culturam pertinent, sic figilinae. Neque ideo non in quo agro idoneae possunt esse non exercendae, atque ex iis capiendi fructus: ut etiam, si ager secundum viam et opportunus viatoribus locus, aedificandae tabernae devorsoriae, quae tamen, quamvis sint fructuosae, nihilo magis sunt agri culturae partes. Non enim, siquid propter agrum aut etiam in agro profectus domino, agri culturae acceptum referre debet, sed id modo quod ex satione terra sit natum ad fruendum. Suscipit Stolo, Tu, inquit, invides tanto scriptori et obstrigillandi causa figlinas reprehendis, cum praeclara quaedam, ne laudes, praetermittas, quae ad agri culturam vehementer pertineant. Cum subrisisset Scrofa, quod non ignorabat libros et despiciebat, et Agrasius se scire modo putaret ac Stolonem rogasset ut diceret, coepit: Scribit cimices quem ad modum interfici oporteat his verbis: ‘cucumerem anguinum condito in aquam eamque infundito quo voles, nulli accedent; vel fel bubulum cum aceto mixtum, unguito lectum’. Fundanius aspicit ad Scrofam, Et tamen verum dicit, inquit, hic, ut hoc scripserit in agri cultura. Ille, Tam hercle quam hoc, siquem glabrum facere velis, quod iubet ranam luridam coicere in aquam, usque qua ad tertiam partem decoxeris, eoque unguere corpus. Ego, Quod magis, inquam, pertineat ad Fundani valetudinem in eo libro, est satius dicas: nam huiusce pedes solent dolere, in fronte contrahere rugas. Dic sodes, inquit Fundanius: nam malo de meis pedibus audire, quam quem ad modum pedes betaceos seri oporteat. Stolo subridens, Dicam, inquit, eisdem quibus ille verbis scripsit (vel Tarquennam audivi, cum homini pedes dolere coepissent, qui tui meminisset, ei mederi posse): ‘ego tui memini, medere meis pedibus, terra pestem teneto, salus hic maneto in meis pedibus’. Hoc ter noviens cantare iubet, terram tangere, despuere, ieiunum cantare. Multa, inquam, item alia miracula apud Sasernas invenies, quae omnia sunt diversa ab agri cultura et ideo repudianda.

Quasi vero, inquit, non apud ceteros quoque scriptores talia reperiantur. An non in magni illius Catonis libro, qui de agri cultura est editus, scripta sunt permulta similia, ut haec, quem ad modum placentam facere oporteat, quo pacto libum, qua ratione pernas sallere? Illud non dicis, inquit Agrius, quod scribit, ‘si velis in convivio multum bibere cenareque libenter, ante esse oportet brassicam crudam ex aceto aliqua folia quinque’.

[21] “If that is so,” replied Agrasius, “how can cattle be kept off the land, when manure, which enhances its value very greatly, is supplied by the herds?” “By that method of reasoning,” retorted Agrius, “we may assert that slave-trading is a branch of agriculture, if we decide to keep a gang for that purpose. The error lies in the assumption that, because cattle can be kept on the land and be a source of profit there, they are part of agriculture. It does not follow; for by that reasoning we should have to embrace other things quite foreign to agriculture; as, for instance, you might keep on your farm a number of spinners, weavers, and other artisans.”

“Very well,” said Scrofa, “let us exclude grazing from agriculture, and whatever else anyone wishes.” [22] “Am I, then,” said I, “to follow the writings of the elder and the younger Saserna, and consider that how to manage clay-pits is more related to agriculture than mining for silver or other mining such as undoubtedly is carried out on some land? [23] But as quarries for stone or sand-pits are not related to agriculture, so too clay-pits. This is not to say that they are not to be worked on land where it is suitable and profitable; as further, for instance, if the farm lies along a road and the site is convenient for travellers, a tavern might be built; however profitable it might be, still it would form no part of agriculture. For it does not follow that whatever profit the owner makes on account of the land, or even on the land, should be credited to the account of agriculture, but only that which, as the result of sowing, is born of the earth for our enjoyment.” [24] “You are jealous of that great writer,” interrupted Stolo, “and you attack his potteries carpingly, while passing over the excellent observations he makes bearing very closely on agriculture, so as not to praise them.” [25] This brought a smile from Scrofa, who knew the books and despised them; and Agrasius, thinking that he alone knew them, asked Stolo to give a quotation. “This is his recipe for killing bugs,” he said: “ ‘Soak a wild cucumber in water, and wherever you sprinkle the water the bugs will not come.’ And again, ‘Grease your bed with ox gall, mixed with vinegar.’ ” [26] “And still it is good advice,” said Fundanius, glancing at Scrofa, “even if he did write it in a book on agriculture.” “Just as good, by Hercules,” he replied, “as this one for the making of a depilatory: ‘Throw a yellow frog into water, boil it down to one-third, and rub the body with it.’ ” “It would be better for you to quote from that book,” said I, “a passage which bears more closely on the trouble from which Fundanius suffers; for his feet are always hurting him and bringing wrinkles to his brow.” [27] “Tell me, pray,” exclaimed Fundanius; “I would rather hear about my feet

than how beet-roots ought to be planted.” “I will tell you,” said Stolo, with a smile, “in the very words in which he wrote it (at least I have heard Tarquenna say that when a man’s feet begin to hurt he may be cured if he will think of you): ‘I am thinking of you, cure my feet. The pain go in the ground, and may my feet be sound.’ He bids you chant this thrice nine times, touch the ground, spit on it, and be fasting while you chant.” [28] “You will find many other marvels in the books of the Sasernas,” said I, “which are all just as far away from agriculture and therefore to be disregarded.” “Just as if,” said he, “such things are not found in other writers also. Why, are there not many such items in the book of the renowned Cato, which he published on the subject of agriculture, such as his recipes for placenta, for libum, and for the salting of hams?” “You do not mention that famous one of his composing,” said Agrius: “‘If you wish to drink deep at a feast and to have a good appetite, eat some half-dozen leaves of raw cabbage with vinegar before dinner.’”

III.

Igitur, inquit Agrasius, quae diiungenda essent a cultura cuius modi sint, quoniam discretum, de iis rebus quae scientia sit in colendo nos docete, ars id an quid aliud, et a quibus carceribus decurrat ad metas. Stolo cum aspexisset Scrofam, Tu, inquit, et aetate et honore et scientia quod praestas, dicere debes. Ille non gravatus, Primum, inquit, non modo est ars, sed etiam necessaria ac magna; eaque est scientia, quae sint in quoque agro serenda ac facienda, quo terra maximos perpetuo reddat fructus.

[3.1] “Well, then,” said Agrasius, “since we have decided the nature of the subjects which are to be excluded from agriculture, tell us whether the knowledge of those things used in agriculture is an art or not, and trace its course from starting-point to goal.” Glancing at Scrofa, Stolo said: “You are our superior in age, in position, and in knowledge, so you ought to speak.” And he, nothing loath, began: “In the first place, it is not only an art but an important and noble art. It is, as well, a science, which teaches what crops are to be planted in each kind of soil, and what operations are to be carried on, in order that the land may regularly produce the largest crops.

IV.

Eius principia sunt eadem, quae mundi esse Ennius scribit, aqua, terra, anima et sol. Haec enim cognoscenda, priusquam iacias semina, quod initium fructuum oritur. Hinc profecti agricolae ad duas metas dirigere debent, ad utilitatem et voluptatem. Utilitas quaerit fructum, voluptas delectationem: priores partes agit quod utile est, quam quod delectat. Nec non ea, quae faciunt cultura honestiorem agrum, pleraque non solum fructuosiore eadem faciunt, ut cum in ordinem sunt consita arbusta atque oliveta, sed etiam vendibiliorem atque adiciunt ad fundi pretium. Nemo enim eadem utilitati non formosius quod est emere mavult pluris, quam si est fructuosus turpis.

Utilissimus autem is ager qui salubrior est quam alii, quod ibi fructus certus; contra [quod] in pestilenti calamitas, quamvis in feraci agro, colonum ad fructus pervenire non patitur. Etenim ubi ratio cum orco habetur, ibi non modo fructus est incertus, sed etiam colentium vita. Quare ubi salubritas non est, cultura non aliud est atque alea domini vitae ac rei familiaris. Nec haec non deminuitur scientia. Ita enim salubritas, quae ducitur e caelo ac terra, non est in nostra potestate, sed in naturae, ut tamen multum sit in nobis, quo graviora quae sunt ea diligentia leviora facere possimus. Etenim si propter terram aut aquam odore, quem aliquo loco eructat, pestilentior est fundus, aut propter caeli regionem ager calidior sit, aut ventus non bonus flet, haec vitia emendari solent domini scientia ac sumptu, quod permagni interest, ube sint positae villae, quanta sint, quo spectent porticibus, ostiis ac fenestris. An non ille Hippocrates medicus in magna pestilentia non unum agrum, sed multa oppida scientia servavit? Sed quid ego illum voco ad testimonium? Non hic Varro noster, cum Corcyrae esset exercitus ac classis et omnes domus repletae essent aegrotis ac funeribus, immisso fenestris novis aquilone et obstructis pestilentibus ianuaque permutata ceteraque eius generis diligentia suos comites ac familiam incolumes reduxit?

[4.1] “Its elements are the same as those which Ennius says are the elements of the universe — water, earth, air, and fire. You should have some knowledge of these before you cast your seed, which is the first step in all production. Equipped with this knowledge, the farmer should aim at two goals, profit and pleasure; the object of the first is material return, and of the second enjoyment. The profitable plays a more important rôle than the pleasurable; [2] and yet for the most part the methods of cultivation which improve the aspect of the land, such as the planting of fruit and olive trees in rows, make it not only more profitable but also more saleable, and add to the value of the estate. For any man would rather pay more for a piece of land which is attractive than for one of the same value which, though profitable, is unsightly. [3] Further, land which is more wholesome is more valuable, because on it the profit is certain; while, on the other hand, on land that is unwholesome, however rich it may be, misfortune does not permit the farmer to reap a profit. For where the reckoning is with death, not only is the profit uncertain, but also the life of the farmers; so that, lacking wholesomeness, agriculture becomes nothing else than a game of chance, in which the life and the property of the owner are at stake. [4] And yet this risk can be lessened by science; for, granting that healthfulness, being a product of climate and soil, is not in our power but in that of nature, still it depends greatly on us, because we can, by care, lessen the evil effects. For if the farm is unwholesome on account of the nature of the land or the water, from the miasma which is exhaled in some spots; or if, on account of the climate, the land is too hot or the wind is not salubrious, these faults can be alleviated by the science and the outlay of the owner. The situation of the buildings, their size, the exposure of the galleries, the doors, and the windows, are matters of the highest importance. [5] Did not

that famous physician, Hippocrates, during a great pestilence save not one farm but many cities by his skill? But why do I cite him? Did not our friend Varro here, when the army and fleet were at Corcyra, and all the houses were crowded with the sick and the dead, by cutting new windows to admit the north wind, and shutting out the infected winds, by changing the position of doors, and other precautions of the same kind, bring back his comrades and his servants in good health?

V.

Sed quoniam agri culturae quod esset initium et finis dixi, relinquitur quot partes ea disciplina habeat ut sit videndum. Equidem innumerabiles mihi videntur, inquit Agrius, cum lego libros Theophrasti complures, qui inscribuntur phuton istorias et alteri phutikon aition. Stolo, Isti, inquit, libri non tam idonei iis qui agrum colere volunt, quam qui scholas philosophorum; neque eo dico, quo non habeant et utilia et communia quaedam. Quapropter tu potius agri culturae partes nobis expone. Scrofa, Agri culturae, inquit, quattuor sunt partes summae: e quis prima cognitio fundi, solum partesque eius quales sint; secunda, quae in eo fundo opus sint ac debeant esse culturae causa; tertia, quae in eo praedio colendi causa sint facienda; quarta, quo quicque tempore in eo fundo fieri conveniat. De his quattuor generalibus partibus singulae minimum in binas dividuntur species, quod habet prima ea quae ad solum pertinent terrae et iterum quae ad villas et stabula. Secunda pars, quae moventur atque in fundo debent esse culturae causa, est item bipertita, de hominibus, per quos colendum, et de reliquo instrumento. Tertia pars quae de rebus dividitur, quae ad quamque rem sint praeparanda et ubi quaeque facienda. Quarta pars de temporibus, quae ad solis circumitum annum sint referenda et quae ad lunae menstruum cursum. De primis quattuor partibus prius dicam, deinde subtilius de octo secundis.

[5.1] “But as I have stated the origin and the limits of the science, it remains to determine the number of its divisions.” “Really,” said Agrius, “it seems to me that they are endless, when I read the many books of Theophrastus, those which are entitled ‘The History of Plants’ and ‘The Causes of Vegetation.’” [2] “His books,” replied Stolo, “are not so well adapted to those who wish to tend land as to those who wish to attend the schools of the philosophers; which is not to say that they do not contain matter which is both profitable and of general interest. [3] So, then, do you rather explain to us the divisions of the subject.” “The chief divisions of agriculture are four in number,” resumed Scrofa: “First, a knowledge of the farm, comprising the nature of the soil and its constituents; second, the equipment needed for the operation of the farm in question; third, the operations to be carried out on the place in the way of tilling; and fourth, the proper season for each of these operations. [4] Each of these four general divisions is divided into at least two subdivisions the first comprises questions with regard to the soil as such, and those which pertain to

housing and stabling. The second division, comprising the movable equipment which is needed for the cultivation of the farm, is also subdivided into two: the persons who are to do the farming, and the other equipment. The third, which covers operations, is subdivided: the plans to be made for each operation, and where each is to be carried on. The fourth, covering the seasons, is subdivided: those which are determined by the annual revolution of the sun, and those determined by the monthly revolution of the moon. I shall discuss first the four chief divisions, and then the eight subdivisions in more detail.

VI.

Igitur primum de solo fundi videndum haec quattuor, quae sit forma, quo in genere terrae, quantus, quam per se tutus. Formae cum duo genera sint, una quam natura dat, altera quam sationes imponunt, prior, quod alius ager bene natus, alius male, posterior, quod alius fundus bene consitus est, alius male, dicam prius de naturali. Igitur cum tria genera sint a specie simplicia agrorum, campestre, collinum, montanum, et ex iis tribus quartum, ut in eo fundo haec duo aut tria sint, ut multis locis licet videre, e quibus tribus fastigiis simplicibus sine dubio infimis alia cultura aptior quam summis, quod haec calidiora quam summa, sic collinis, quod ea tepidiora quam infima aut summa: haec apparent magis ita esse in latioribus regionibus, simplicia cum sunt. Itaque ubi lati campi, ibi magis aestus, et eo in Apulia loca calidiora ac graviora, et ubi montana, ut in Vesuvio, quod leviora et ideo salubriora: qui colunt deorsum, magis aestate laborant, qui susum, magis hieme. Verno tempore in campestribus maturius eadem illa seruntur quae in superioribus et celerius hic quam illic coguntur. Nec non susum quam deorsum tardius seruntur ac metuntur. Quaedam in montanis prolixiora nascuntur ac firmiora propter frigus, ut abietes ac sappini, hic, quod tepidiora, populi ac salices: susum fertiliora, ut arbutus ac quercus, deorsum, ut nuces graecae ac mariscae fici. In collibus humilibus societas maior cum campestri fructu quam cum montano, in altis contra. Propter haec tria fastigia formae discrimina quaedam fiunt sationum, quod segetes meliores existimantur esse campestres, vineae collinae, silvae montanae. Plerumque hiberna iis esse meliora, qui colunt campestria, quod tunc prata ibi herbosa, putatio arborum tolerabilior: contra aestiva montanis locis commodiora, quod ibi tum et pabulum multum, quod in campis aret, ac cultura arborum aptior, quod tum hic frigidior aer. Campester locus is melior, qui totus aequabiliter in unam partem verget, quam is qui est ad libellam aequos, quod is, cum aquae non habet delapsus, fieri solet uliginosus: eo magis, siquis est inaequabilis, eo deterior, quod fit propter lacunas aquosus. Haec atque huiusce modi tria fastigia agri ad colendum disperiliter habent momentum.

[6.1] "First, then, with respect to the soil of the farm, four points must be considered: the conformation of the land, the quality of the soil, its extent, and

in what way it is naturally protected. As there are two kinds of conformation, the natural and that which is added by cultivation, in the former case one piece of land being naturally good, another naturally bad, and in the latter case one being well tilled, another badly, I shall discuss first the natural conformation. [2] There are, then, with respect to the topography, three simple types of land — plain, hill, and mountain; though there is a fourth type consisting of a combination of these, as, for instance, on a farm which may contain two or three of those named, as may be seen in many places. Of these three simple types, undoubtedly a different system is applicable to the lowlands than to the mountains, because the former are hotter than the latter; and the same is true of hillsides, because they are more temperate than either the plains or the mountains. [3] These qualities are more apparent in broad stretches, when they are uniform; thus the heat is greater where there are broad plains, and hence in Apulia the climate is hotter and more humid, while in mountain regions, as on Vesuvius, the air is lighter and therefore more wholesome. Those who live in the lowlands suffer more in summer; those who live in the uplands suffer more in winter; the same crops are planted earlier in the spring in the lowlands than in the uplands, and are harvested earlier, while both sowing and reaping come later in the uplands. [4] Certain trees, such as the fir and the pine, flourish best and are sturdiest in the mountains on account of the cold climate, while the poplar and the willow thrive here where the climate is warmer; the arbutue and the oak do better in the upland, the almond and the mariscan fig in the lowlands. On the foothills the growth is nearer akin to that of the plains than to that of the mountains; on the higher hills the opposite is true. [5] Owing to these three types of configuration different crops are planted, grain being considered best adapted to the plains, vines to the hills, and forests to the mountains. Usually the winter is better for those who live in the plains, because at that season the pastures are fresh, and pruning can be carried on in more comfort. On the other hand, the summer is better in the mountains, because there is abundant forage at that time, whereas it is dry in the plains, and the cultivation of the trees is more convenient because of the cooler air. [6] A lowland farm that everywhere slopes regularly in one direction is better than one that is perfectly level, because the latter, having no outlet for the water, tends to become marshy. Even more unfavourable is one that is irregular, because pools are liable to form in the depressions. These points and the like have their differing importance for the cultivation of the three types of configuration.”

VII.

Stolo, Quod ad hanc formam naturalem pertinet, de eo non incommode Cato videtur dicere, cum scribit optimum agrum esse, qui sub radice montis situs sit et spectet ad meridianam caeli partem. Subicit Scrofa, De formae cultura hoc dico, quae specie fiant venustiora, sequi ut maiore quoque fructu sint, ut qui habent arbusta, si sata sunt in quincuncem, propter ordines atque intervalla

modica. Itaque maiores nostri ex arvo aequae magno male consito et minus multum et minus bonum faciebant vinum et frumentum, quod quae suo quicque loco sunt posita, ea minus loci occupant, et minus officit aliud alii ab sole ac luna et vento. Hoc licet coniectura videre ex aliquot rebus, ut nuces integras quas uno modio comprehendere possis, quod putamina suo loco quaeque habet natura composita, cum easdem, si fregeris, vix sesquimodio concipere possis. Praeterea quae arbores in ordinem satae sunt, eas aequabiliter ex omnibus partibus sol ac luna coquunt. Quo fit ut uvae et oleae plures nascantur et ut celerius coquantur. Quas res duas sequuntur altera illa duo, ut plus reddant musti et olei et preti pluris.

Sequitur secundum illud, quali terra solum sit fundi, a qua parte vel maxime bonus aut non bonus appellatur. Refert enim, quae res in eo seri nascique et cuius modi possint: non enim eadem omnia in eodem agro recte possunt. Nam ut alius est ad vitem appositus, alius ad frumentum, sic de ceteris alius ad aliam rem. Itaque Cretae ad Cortyniam dicitur platanus esse, quae folia hieme non amittat, itemque in Cypro, ut Theophrastus ait, una, item Subari, qui nunc Thurii dicuntur, quercus simili esse natura, quae est in oppidi conspectu: item contra atque apud nos fieri ad Elephantinen, ut neque ficus neque vites amittant folia. Propter eandem causam multa sunt bifera, ut vitis apud mare Zmyrnae, malus in agro Consentino. Idem ostendit, quod in locis feris plura ferunt, in iis quae sunt culta meliora. Eadem de causa sunt quae non possunt vivere nisi in loco aquoso aut etiam aqua, et id discriminatim alia in lacubus, ut [h]arundines in Reatino, alia in fluminibus, ut in Epiro arbores alni, alia in mari, ut scribit Theophrastus palmas et squillas. In Gallia transalpina intus, ad Rhenum cum exercitum ducerem, aliquot regiones accessi, ubi nec vitis nec olea nec poma nascerentur, ubi agros stercorarent candida fossicia creta, ubi salem nec fossicium nec maritimum haberent, sed ex quibusdam lignis combustis carbonibus salsis pro eo uterentur. Stolo, Cato quidem, inquit, gradatim praeponens alium alio agrum meliorem dicit esse in novem discriminibus, quod sit primus ubi vineae possint esse bono vino et multo, secundus ubi hortus inriguus, tertius ubi salicta, quartus ubi oliveta, quintus ubi pratum, sextus ubi campus frumentarius, septimus ubi caedua silva, octavus ubi arbustum, nonus ubi glandaria silva. Scrofa, Scio, inquit, scribere illum; sed de hoc non consentiunt omnes, quod alii dant primatum bonis pratis, ut ego, a quoantiqui prata parata appellarunt. Caesar Vopiscus, aedilicius causam cum ageret apud censores, campos Roseae Italiae dixit esse sumen, in quo relicta pertica postridie non appareret propter herbam.

[7.1] “So far as concerns the natural situation,” said Stolo, “it seems to me that Cato was quite right when he said that the best farm was one that was situated at the foot of a mountain, facing south.” [2] Scrofa continued: “With regard to the conformation due to cultivation, I maintain that the more regard is had for appearances the greater will be the profits: as, for instance, if those who have orchards plant them in quincunxes, with regular rows and at moderate

intervals. Thus our ancestors, on the same amount of land but not so well laid out, made less wine and grain than we do, and of a poorer quality; for plants which are placed exactly where each should be take up less ground and screen each other less from the sun, the moon, and the air. [3] You may prove this by one of several experiments; for instance, a quantity of nuts which you can hold in a modius measure with their shells whole, because the shells naturally keep them compacted, you can scarcely pack into a modius and a half when they are cracked. [4] As to the second point, trees which are planted in a row are warmed by the sun and the moon equally on all sides, with the result that more grapes and olives form, and that they ripen earlier; which double result has the double consequence that they yield more must and oil, and of greater value.

[5] “We come now to the second division of the subject, the type of soil of which the farm is composed. It is in respect of this chiefly that a farm is considered good or bad; for it determines what crops, and of what variety, can be planted and raised on it, as not all crops can be raised with equal success on the same land. As one type is suited to the vine and another to grain, so of others — one is suited to one crop, another to another. [6] Thus near Cortynia, in Crete, there is said to be a plane tree which does not shed its leaves in winter, and another in Cyprus, according to Theophrastus. Likewise at Sybaris, which is now called Thurii, there is said to be an oak tree of like character, in sight of the town; and that near Elephantine neither the fig nor the vine sheds its leaves — which is quite the opposite of what happens with us. For the same reason there are many trees which bear two crops a year, such as the vine on the coast near Smyrna, and the apple in the district of Consentia. [7] The fact that trees produce more fruit in uncultivated spots, and better fruit under cultivation, proves the same thing. For the same reason there are plants which cannot live except in marshy ground, or actually in the water and not in every kind of water. Some grow in ponds, as the reeds near Reate, others in streams, as the alder trees in Epirus, and still others in the sea, as the palms and squills of which Theophrastus writes. [8] When I was in command of the army in the interior of Transalpine Gaul near the Rhine, I visited a number of spots where neither vines nor olives nor fruit trees grew; where they fertilized the land with a white chalk which they dug; where they had no salt, either mineral or marine, but instead of it used salty coals obtained by burning certain kinds of wood.” [9] “Cato, you know,” interjected Stolo, “in arranging plots according to the degree of existence, formed nine categories: first, land on which vines can bear a large quantity of wine of good quality; second, land suited for a watered garden; third, for an osier bed; fourth, for olives; fifth, for meadows; sixth, for a grain field; seventh, for a wood lot; eighth, for an orchard; ninth, for a mast grove.” [10] “I know he wrote that,” replied Scrofa, “but all authorities do not agree with him on this point. There are some who assign the first place to good meadows, and I am one of them. Hence our ancestors gave the name *prata* to meadow-land as being ready

(parata). Caesar Vopiscus, once an aedile, in pleading a case before the censors, spoke of the plains of Rosea as the nursing-ground of Italy, such that if a rod were left there overnight, it would be lost the next morning on account of the growth of the grass.

VIII.

Contra vineam sunt qui putent sumptu fructum devorare. Refert, inquam, quod genus vineae sit, quod sunt multae species eius. Aliae enim humiles ac sine ridicis, ut in Hispania, aliae sublimes, quae appellantur iugatae, ut pleraeque in Italia. Cuius generis nomina duo, pedamenta et iuga. Quibus stat rectis vinea, dicuntur pedamenta; quae transversa iunguntur, iuga: ab eo quoque vineae iugatae. Iugorum genera fere quattuor, pertica, harundo, restes, vites: pertica, ut in Falerno, harundo, ut in Arpano, restes, ut in Brundisino, vites, ut in Mediolanensi. iugationis species duae, una directa, ut in agro Canusino, altera conpluviata in longitudinem et latitudinem iugata, ut in Italia pleraeque. Haec ubi domo nascuntur, vinea non metuit sumptum; ubi multa e propinqua villa, non valde. Primum genus quod dixi maxime quaerit salicta, secundum harundineta, tertium iunceta aut eius generis rem aliquam, quartum arbusta, ubi traduces possint fieri vitium, ut Mediolanenses faciunt in arboribus, quas vocant opulos, Canusini in hardulatione in ficis. Pedamentum item fere quattuor generum: unum robustum, quod optimum solet afferri in vineam e quercu ac iunipiro et vocatur ridica; alterum palus e pertica, meliore dura, quo diuturnior; quem cum infimum terra solvit, puter evertitur et fit solum summum: tertium, quod horum inopiae subsidio misit harundinetum. Inde enim aliquot colligatas libris demittunt in tubulos fictiles cum fundo pertuso, quas cuspides appellant, qua umor adventicius transire possit. Quartum est pedamentum nativum eius generis, ubi ex arboribus in arbores traductis vitibus vinea fit, quos traduces quidam rumpos appellant. Vineae altitudinis modus longitudo hominis, intervalla pedamentorum, qua boves iuncti arare possint. Ea minus sumptuosa vinea, quae sine iugo ministrat acratophoro vinum. Huius genera duo: unum, in quo terra cubilia praebet uvis, ut in Asia multis locis, quae saepe vulpibus et hominibus fit communis. Nec non si parit humus mures, minor fit vindemia, nisi totas vineas oppleris muscipulis, quod in insula Pandateria faciunt. Alterum genus vineti, ubi ea modo removetur a terra vitis, quae ostendit se adferre uvam. Sub eam, ubi nascitur uva, subiciuntur circiter bipedales e surculis furcillae, ne vindemia facta denique discat pendere in palma aut funiculo aut vinctu, quod antiqui vocabant cestum. Ibi dominus simul ac vidit occipitium vindemiatoris, furcillas reducit hibernatum in tecta, ut sine sumptu harum opera altero anno uti possit. Hac consuetudine in Italia utuntur Reatini. Haec ideo varietas maxime, quod terra cuius modi sit refert. Ubi enim natura umida, ibi altius vitis tollenda, quod in partu et alimonio vinum non ut in calice quaerit aquam, sed solem. Itaque ideo, ut arbitror, primum e vinea in arbores escendit vitis.

[8.1] "As an argument against the vineyard, there are those who claim that the cost of upkeep swallows up the profits. In my opinion, it depends on the kind of vineyard, for there are several: for some are low-growing and without props, as in Spain; others tall, which are called 'yoked,' as generally in Italy. For this latter class there are two names, *pedamenta* and *iuga*: those on which the vine runs vertically are called *pedamenta* (stakes), and those on which it runs transversely are called *iuga* (yokes); and from this comes the name 'yoked vines.' [2] Four kinds of 'yokes' are usually employed, made respectively of poles, of reeds, of cords, and of vines: the first of these, for example, around Falernum, the second around Arpi, the third around Brundisium, the fourth around Mediolanum. There are two forms of this trellising: in straight lines, as in the district of Canusium, or yoked lengthways and sideways in the form of the *compluvium*, as is the practice generally in Italy. If the material grows on the place the vineyard does not mind the expense; and it is not burdensome if much of it can be obtained in the neighbourhood. [3] The first class I have named requires chiefly a willow thicket, the second a reed thicket, the third a rush bed or some material of the kind. For the fourth you must have an *arbustum*, where trellises can be made of the vines, as the people of Mediolanum do on the trees which they call *opuli* (maples), and the Canusians on lattice-work in fig trees. [4] Likewise, there are, as a rule, four types of props. The best for common use in the vineyard is a stout post, called *ridica*, made of oak or juniper. The second best is a stake made from a branch, and preferably from a tough one, so that it will last longer; when one end has rotted in the ground the stake is reversed, what had been the top becoming the bottom. The third, which is used only as a substitute when the others are lacking, is formed of reeds; bundles of these, tied together with bark, are planted in what they call *cuspides*, earthenware pipes with open bottoms so that the casual water can run out. The fourth is the natural prop, where the vineyard is formed of vines growing across from tree to tree; such traverses are called by some *rumpi*. [5] The limit to the height of the vineyard is the height of a man, and the intervals between the props should be sufficient to allow a yoke of oxen to plough between. The most economical type of vineyard is that which furnishes wine to beaker without the aid of trellises. There are two kinds of these: one in which the ground serves as a bed for the grapes, as in many parts of Asia. The foxes often share the harvest with man in such vineyards, and if the land breeds mice the yield is cut short unless you fill the whole vineyard with traps, as they do in the island Pandateria. [6] In the other type only those branches are raised from the ground which give promise of producing fruit. These are propped on forked sticks about two feet long, at the time when the grapes form, so that they may not wait until the harvest is over to learn to hang in a bunch by means of a string or the fastening which our fathers called a *cestus*. In such a vineyard, as soon as the master sees the back of the vintager he takes his forks back to hibernate under cover so that he may be able to enjoy their assistance without cost the

next year. In Italy the people of Reate practise this custom. [7] This variation in culture is caused chiefly by the fact that the nature of the soil makes a great difference; where this is naturally humid the vine must be trained higher, because while the wine is forming and ripening it does not need water, as it does in the cup, but sun. And that is the chief reason, I think, that the vines climb up trees.

IX.

Terra, inquam, cuius modi sit refert et ad quam rem bona aut non bona sit. Ea tribus modis dicitur, communi et proprio et mixto. Communi, ut cum dicimus orbem terrae et terram Italiam aut quam aliam. In ea enim et lapis et harena et cetera eius generis sunt in nominando comprehensa. Altero modo dicitur terra proprio nomine, quae nullo alio vocabulo neque cognomine adiecto appellatur. Tertio modo dicitur terra, quae est mixta, in qua seri potest quid et nasci, ut argillosa aut lapidosa, sic aliae, cum in hac species non minus sint multae quam in illa communi propter admixtiones. In illa enim cum sint dissimili vi ac potestate partes permultae, in quis lapis, marmor, rudus, harena, sabulo, argilla, rubrica, pulvis, creta, cinis, carbunculus, id est quae sole perferve ita fit, ut radices satorum comburat, ab iis quae proprio nomine dicitur terra, cum est admixta ex iis generibus aliqua re, dicitur aut cretosa * *

* sic ab aliis generum discriminibus mixta. Horum varietatis ita genera haec, ut praeterea subtiliora sint alia, minimum in singula facie terna, quod alia terra est valde lapidosa, alia mediocriter, alia prope pura. Sic de aliis generibus reliquis admixtae terrae tres gradus ascendunt eosdem. Praeterea hae ipsae ternae species ternas in se habent alias, quod partim sunt umidiore, partim aridiore, partim mediocres. Neque non haec discrimina pertinent ad fructus vehementer. Itaque periti in loco umidiore far adorem potius serunt quam triticum, contra in aridiore hordeum potius quam far, in mediocri utrumque. Praeterea etiam discrimina omnium horum generum subtiliora alia, ut in sabulosa terra, quod ibi refert sabulo albus sit an rubicundus, quod subalbus ad serendos surculos alienus, contra rubicundior appositus. Sic magna tria discrimina terrae, quod refert utrum sit macra an pinguis an mediocris, quod ad culturam pinguis fecundior ad multa, macra contra. Itaque in tenui, ut in Pupinia, neque arbores prolixae neque vites feraces, neque stramenta videre crassa possis neque ficum mariscam et arbores plerasque ac prata retorruda muscosa. Contra in agro pingui, ut in Etruria, licet videre et segetes fructuosas ac restibilis et arbores prolixas et omnia sine musco. In mediocri autem terra, ut in Tiburti, quo propius accedit ut non sit macra, quam ut sit ieiuna, eo ad omnes res commodior, quam si inclinabit ad illud quod deterius. Stolo, Non male, inquit, quae sit idonea terra ad colendum aut non, Diophanes Bithynos scribit signa sumi posse aut ex ipsa aut quae nascuntur ex iis: ex ipsa, si sit terra alba, si nigra, si levis, quae cum fodiat, facile frietur, natura quae non sit cineracia neve vehementer densa: ex iis autem quae enata sunt fera, si sunt prolixa atque quae ex iis nasci debent earum rerum feracia. Sed quod sequitur,

[9.1] “The nature of the soil, I say, makes a great difference, in determining to what it is or is not adapted. The word *terra* is used in three senses, the general, the specific, and the mixed. It is used in the general sense when we speak of the *orbis terrae*, or of the *terra* of Italy or any other country; for in that designation are included rock, and sand, and other such things. The word is used specifically in the second sense when it is employed without the addition of a qualifying word or epithet. [2] It is used in the third or mixed sense, of the element in which seed can be planted and germinate — such as clay soil, rocky soil, etc. In this last sense of the word there are as many varieties of earth as when it is used in the general sense, on account of the different combinations of substances. For there are many substances in the soil, varying in consistency and strength, such as rock, marble, rubble, sand, loam, clay, red ochre, dust, chalk, ash, carbuncle (that is, when the ground becomes so hot from the sun that it chars the roots of plants); [3] and soil, using the word in its specific sense, is called chalky or . . . according as one of these elements predominates — and so of other types of soil. The classes of these vary in such a way that there are, besides other subdivisions, at least three for each type: rocky soil, for instance, may be very rocky, or moderately rocky, or almost free of rocks, and in the case of other varieties of mixed soil the same three grades are distinguished. [4] And further, each of these three grades contains three grades: one may be very wet, one very dry, one intermediate. And these distinctions are not without the greatest importance for the crops; thus the intelligent farmer plants spelt rather than wheat on wet land, and on the other hand barley rather than spelt on dry land, while he plants either on the intermediate. [5] Furthermore, even finer distinctions are made in all these classes, as, for instance, in loamy soil it makes a difference whether the loam be white or red, as the whitish loam is not suited to nurseries, while the reddish is well adapted. Thus there are three chief distinctions in soil, according as it is poor, rich, or medium; the rich being able to produce many kinds of vegetation, and the poor quite the opposite. In thin soil, as, for instance, in Pupinia, you see no sturdy trees, nor vigorous vines, nor stout straw, nor mariscan figs, and most of the trees are covered with moss, as are the parched meadows. [6] On the other hand, in rich soil, like that in Etruria, you can see rich crops, land that can be worked steadily, sturdy trees, and no moss anywhere. In the case of medium soil, however, such as that near Tibur, the nearer it comes to not being thin than to being sterile, the more it is suited to all kinds of growth than if it inclined to the poorer type.” [7] “Diophanes of Bithynia makes a good point,” remarked Stolo, “when he writes that you can judge whether land is fit for cultivation or not, either from the soil itself or from the vegetation growing on it: from the soil according as it is white or black, light and crumbling easily when it is dug, of a consistency not ashy and not excessively heavy; from the wild vegetation growing on it if it is luxuriant and bearing abundantly its natural products. But proceed to your third topic,

that of measurement.”

X.

Ille, Modos, quibus metirentur rura, alius alios constituit. Nam in Hispania ulteriore metiuntur iugis, in Campania versibus, apud nos in agro Romano ac Latino iugeris. Iugum vocant, quod iuncti boves uno die exarare possint. Versum dicunt centum pedes quoquo versum quadratum. Iugerum, quod quadratos duos actus habeat. Actus quadratus, qui et latus est pedes CXX et longus totidem: is modus acnua latine appellatur. Iugeri pars minima dicitur scripulum, id est decem pedes et longitudine et latitudine quadratum. Ab hoc principio mensores non numquam dicunt in subsicivum esse unciam agri aut sextantem, sic quid aliud, cum ad iugerum pervenerunt, quod habet iugerum scripula CCLXXXVIII, quantum as antiquos noster ante bellum punicum pendebat. Bina iugera quod a Romulo primum divisa dicebantur viritim, quae heredem sequerentur, heredium appellarunt. Haec postea centum centuria. Centuria est quadrata, in omnes quattuor partes ut habeat latera longa pedum *
*CD. Hae porro quattuor, centuriae coniunctae ut sint in utramque partem binae, appellantur in agris divisus viritim publice saltus.

[10.1] Scrofa resumed: “Each country has its own method of measuring land. Thus in farther Spain the unit of measure is the iugum, in Campania the versus, with us here in the district of Rome and in Latium the iugerum. The iugum is the amount of land which a yoke of oxen can plough in a day; the versus is an area 100 feet square; [2] the iugerum an area containing two square actus. The square actus, which is an area 120 feet in each direction, is called in Latin acnua. The smallest section of the iugerum, an area ten feet square, is called a scripulum; and hence surveyors sometimes speak of the odd fractions of land above the iugerum as an uncia or a sextans, or the like; for the iugerum contains 288 scripula, which was the weight of the old pound before the Punic War. Two iugera form a haeredium, from the fact that this amount was said to have been first allotted to each citizen by Romulus, as the amount that could be transmitted by will. Later on 100 haeredia were called a centuria; this is a square area, each side being 2400 feet long. Further, four such centuriae, united in such a way that there are two on each side, are called a saltus in the distribution of public lands.

XI.

In modo fundi non animadverso lapsi multi, quod alii villam minus magnam fecerunt, quam modus postulavit, alii maiorem, cum utrumque sit contra rem familiarem ac fructum. Maiora enim tecta et aedificamus pluris et tuemur sumptu maiore. Minora cum sunt, quam postulat fundus, fructus solent disperire. Dubium enim non est quin cella vinaria maior sit facienda in eo agro, ubi vineta sint, ampliora ut horrea, si frumentarius ager est. Villa aedificanda potissimum ut intra saepta villae habeat aquam, si non, quam

proxime: primum quae ibi sit nata, secundum quae influat perennis. Si omnino aqua non est viva, cisternae faciendae sub tectis et lacus sub dio, ex altero loco ut homines, ex altero ut pecus uti possit.

[11.1] “Many errors result from the failure to observe the measurement of the farm, some building a steading smaller and some larger than the dimensions demand — each of which is prejudicial to the estate and its revenue. For buildings which are too large cost us too much for construction and require too great a sum for upkeep; and if they are smaller than the farm requires the products are usually ruined. [2] There is no doubt, for instance, that a larger wine cellar should be built on an estate where there is a vineyard, and larger granaries if it is a grain farm.

“The steading should be so built that it will have water, if possible, within the enclosure, or at least very near by. The best arrangement is to have a spring on the place, or, failing this, a perennial stream. If no running water is available, cisterns should be built under cover and a reservoir in the open, the one for the use of people and the other for cattle.

XII.

Danda opera ut potissimum sub radicibus montis silvestris villam ponat, ubi pastiones sint laxae, item ut contra ventos, qui saluberrimi in agro flabunt. Quae posita est ad exortos aequinoctiales, aptissima, quod aestate habet umbram, hieme solem. Sin cogare secundum flumen aedificare, curandum ne adversum eam ponas; hieme enim fiet vehementer frigida et aestate non salubris. Advertendum etiam, siqua erunt loca palustria, et propter easdem causas, et quod crescunt animalia quaedam minuta, quae non possunt oculi consequi, et per aera intus in corpus per os ac nares perveniunt atque efficiunt difficilis morbos. Fundanius, Quid potero, inquit, facere, si istius modi mi fundus hereditati obvenierit, quo minus pestilentia noceat? Istuc vel ego possum respondere, inquit Agrius; vendas, quot assibus possis, aut si nequeas, relinquo. At Scrofa, Vitandum, inquit, ne in eas partes spectet villa, e quibus ventus gravior afflare soleat, neve in convalli cava et ut potius in sublimi loco aedifices, qui quod perflatur, siquid est quod adversarium inferatur, facilius discutitur. Praeterea quod a sole toto die inlustratur, salubrior est, quod et bestiolae, siquae prope nascuntur et inferuntur, aut efflantur aut aritudine cito pereunt. Nimbi repentini ac torrentes fluvii periculosi illis, qui in humilibus ac cavis locis aedificia habent, et repentinae praedonum manus quod improvisos facilius opprimere possunt, ab hac utraque re superiora loca tutiora.

[12.1] “Especial care should be taken, in locating the steading, to place it at the foot of a wooded hill, where there are broad pastures, and so as to be exposed to the most healthful winds that blow in the region. A steading facing the east has the best situation, as it has the shade in summer and the sun in winter. If you are forced to build on the bank of a river, be careful not to let the steading

face the river, as it will be extremely cold in winter, and unwholesome in summer. [2] Precautions must also be taken in the neighbourhood of swamps, both for the reasons given, and because there are bred certain minute creatures which cannot be seen by the eyes, which float in the air and enter the body through the mouth and nose and there cause serious diseases.” “What can I do,” asked Fundanius, “to prevent disease if I should inherit a farm of that kind?” “Even I can answer that question,” replied Agrius; “sell it for the highest cash price; or if you can’t sell it, abandon it.” [3] Scrofa, however, replied: “See that the steading does not face in the direction from which the infected wind usually comes, and do not build in a hollow, but rather on elevated ground, as a well-ventilated place is more easily cleared if anything obnoxious is brought in. Furthermore, being exposed to the sun during the whole day, it is more wholesome, as any animalculae which are bred near by and brought in are either blown away or quickly die from the lack of humidity. [4] Sudden rains and swollen streams are dangerous to those who have their buildings in low-lying depressions, as are also the sudden raids of robber bands, who can more easily take advantage of those who are off their guard. Against both these dangers the more elevated situations are safer.

XIII.

In villa facienda stabula ita, ut bubilia sint ibi, hieme quae possint esse caldiora. Fructus, ut est vinum et oleum, loco plano in cellis, item vasa vinaria et olearia potius faciendum; aridus, ut est faba et faenum, in tabulatis. Familia ubi versetur providendum, si fessi opere aut frigore aut calore, ubi commodissime possint se quiete recipere. Vilici proximum ianuam cellam esse oportet eumque scire, qui introeat aut exeat noctu quidve ferat, praesertim si ostiarius est nemo. In primis culina videnda ut sit admota, quod ibi hieme antelucanis temporibus aliquot res conficiuntur, cibus paratur ac capitur. Faciendum etiam plaustis ac cetero instrumento omni in cohorte ut satis magna sint tecta, quibus caelum pluvium inimicum. Haec enim si intra clausum in consaepto et sub dio, furem modo non metuunt, adversus tempestatem nocentem non resistunt. Cohortes in fundo magno duae aptiores: una ut interdus conpluvium habeat lacum, ubi aqua saliat, qui intra stylobatas, cum velit, sit semipiscina. Boves enim ex arvo aestate reducti hic bibunt, hic perfunduntur, nec minus e pabulo cum redierunt anseres, sues, porci. In cohorte exteriore lacum esse oportet, ubi maceretur lupinum, item alia quae demissa in aquam ad usum aptiora fiunt. Cohors exterior crebro operta stramentis ac palea occulcata pedibus pecudum fit ministra fundo, ex ea quod evehatur. Secundum villam duo habere oportet stercilina aut unum bifarium divisum. Alteram enim partem fieri oportet novam, alteram veterem tolli in agrum, quod enim quam recens quod confracuit melius. Nec non stercilinum melius illud, cuius latera et summum virgis ac fronde vindicatum a sole. Non enim sucum, quem quaerit terra, solem ante exugere oportet. Itaque periti, qui possunt, ut eo aqua influat eo nomine faciunt (sic enim maxime retinetur

sucus) in eoque quidam sellas familiaricas ponunt. Aedificium facere oportet, sub quod tectum totam fundi subicere possis messem, quod vocant quidam nubilarium. Id secundum aream faciendum, ubi triturus sis frumentum, magnitudine pro modo fundi, ex una parti apertum, et id ab area, quo et in tritura prouere facile possis et, si nubilare coepit, inde ut rursus celeriter reicere. Fenestras habere oportet ex ea parti, unde commodissime perflari possit. Fundanius, Fructuosior, inquit, est certe fundus propter aedificia, si potius ad anticorum diligentiam quam ad horum luxuriam derigas aedificationem. Illi enim faciebant ad fructum rationem, hi faciunt ad libidines indomitas. Itaque illorum villae rusticae erant maioris preti quam urbanae, quae nunc sunt pleraque contra. Illic laudabatur villa, si habebat culinam rusticam bonam, praesepe laxas, cellam vinariam et oleariam ad modum agri aptam et pavimento proclivi in lacum, quod saepe, ubi conditum novum vinum, orcae in Hispania fervore musti ruptae neque non dolea in Italia. Item cetera ut essent in villa huiusce modi, quae cultura quaereret, providebant. Nunc contra villam urbanam quam maximam ac politissimam habeant dant operam ac cum Metelli ac Luculli villis pessimo publico aedificatis certant. Quo hi laborant ut spectent sua aestiva triclinaria ad frigus orientis, hiberna ad solem occidentem, potius quam, ut antiqui, in quam partem cella vinaria aut olearia fenestras haberet, cum fructus in ea vinarius quaerat ad dolia aera frigidior, item olearia calidior. Item videre oportet, si est collis, nisi quid impedit, ut ibi potissimum ponatur villa.

[13.1] "In laying out the steading, you should arrange the stables so that the cow-stalls will be at the place which will be warmest in winter. Such liquid products as wine and oil should be set away in store-rooms on level ground, and jars for oil and wine should be provided; while dry products, such as beans and hay, should be stored in a floored space. A place should be provided for the hands to stay in when they are tired from work or from cold or heat, where they can recover in comfort. [2] The overseer's room should be next to the entrance, where he can know who comes in or goes out at night and what he takes; and especially if there is no porter. Especially should care be taken that the kitchen be conveniently placed, because there in winter there is a great deal going on before daylight, in the preparation and eating of food. Sheds of sufficient size should also be provided in the barnyard for the carts and all other implements which are injured by rain; for if these are kept in an enclosure inside the walls, but in the open, they will not have to fear thieves, yet they will be exposed to injurious weather. [3] On a large farm it is better to have two farm-yards: one, containing an outdoor reservoir — a pond with running water, which, surrounded by columns, if you like, will form a sort of fish-pond; for here the cattle will drink, and here they will bathe themselves when brought in from ploughing in the summer, not to mention the geese and hogs and pigs when they come from pasture; and in the outer yard there should be a pond for the soaking of lupines and other products which are rendered more fit for use by being immersed in water. [4] As the outer yard is

often covered with chaff and straw trampled by the cattle, it becomes the handmaid of the farm because of what is cleaned off it. Hard by the steading there should be two manure pits, or one pit divided into two parts; into one part should be cast the fresh manure and from the other the rotted manure should be hauled into the field; for manure is not so good when it is put in fresh as when it is well rotted. The best type of manure pit is that in which the top and sides are protected from the sun by branches and leaves; for the sun ought not to dry out the essence which the land needs. It is for this reason that experienced farmers arrange it, when possible, so that water will collect there, for in this way the strength is best retained; and some people place the privies for the servants on it. [5] You should build a shed large enough to store the whole yield of the farm under cover. This shed, which is sometimes called a nubilarium, should be built hard by the floor on which you are to thresh the grain; it should be of a size proportioned to that of the farm, and open only on one side, that next to the threshing floor, so that you can easily throw out the grain for threshing, and quickly throw it back again, if it begins to 'get cloudy.' You should have windows on the side from which it can be ventilated most easily." [6] "A farm is undoubtedly more profitable, so far as the buildings are concerned," said Fundanius, "if you construct them more according to the thrift of the ancients than the luxury of the moderns; for the former built to suit the size of their crops, while the latter build to suit their unbridled luxury. Hence their farms cost more than their dwelling-houses, while now the opposite is usually the case. In those days a steading was praised if it had a good kitchen, roomy stables, and cellars for wine and oil in proportion to the size of the farm, with a floor sloping to a reservoir, because often, after the new wine is laid by, not only the butts which they use in Spain but also the jars which are used in Italy are burst by the fermentation of the must. [7] In like manner they took care that the steading should have everything else that was required for agriculture; while in these times, on the other hand, the effort is to have as large and handsome a dwelling-house as possible; and they vie with the 'farm houses' of Metellus and Lucullus, which they have built to the great damage of the state. What men of our day aim at is to have their summer dining-rooms face the cool east and their winter dining-rooms face the west, rather than, as the ancients did, to see on what side the wine and oil cellars have their windows; for in a cellar wine requires cooler air on the jars, while oil requires warmer. Likewise you should see that, if there be a hill, the house, unless something prevents, should be placed there by preference."

XIV.

Nunc de saeptis, quae tutandi causa fundi aut partis fiant, dicam. Earum tutelarum genera IIII, unum naturale, alterum agreste, tertium militare, quartum fabrile. Horum unum quodque species habet plures. Primum naturale saepimentum, quod opseri solet virgultis aut spinis, quod habet radices ac

vivit, praetereuntis lascivi non metuet facem ardentem. Secunda saeps est agrestis e ligno, sed non vivit: fit aut palis statutis crebris et virgultis implicatis aut latis perforatis et per ea foramina traiectis longuris fere binis aut ternis aut ex arboribus truncis demissis in terram deinceps constitutis. Tertium militare saepimentum est fossa et terreus agger. Sed fossa ita idonea, si omnem aquam, quae e caelo venit, recipere potest aut fastigium habet, ut exeat e fundo. Agger is bonus, qui intrinsecus iunctus fossa aut ita arduus, ut eum transcendere non sit facile. Hoc genus saepes fieri secundum vias publicas solent et secundum amnes. Ad viam Salariam in agro Crustumino videre licet locis aliquot coniunctos aggeres cum fossis, ne flumen agris noceat. Aggeres faciunt sine fossa: eos quidam vocant muros, ut in agro Retino. Quartum fabrilis saepimentum est novissimum, maceria. Huius fere species quattuor, quod fiunt e lapide, ut in agro Tusculano, quod e lateribus coctilibus, ut in agro Gallico, quod e lateribus crudis, ut in agro Sabino, quod ex terra et lapillis compositis in formis, ut in Hispania et agro Tarentino.

[14.1] “Now I shall speak of the enclosures which are constructed for the protection of the farm as a whole, or its divisions. There are four types of such defences: the natural, the rustic, the military, and the masonry type; and each of these types has several varieties. The first type, the natural, is a hedge, usually planted with brush or thorn, having roots and being alive, and so with nothing to fear from the flaming torch of a mischievous passer-by. [2] The second type, the rustic, is made of wood, but is not alive. It is built either of stakes planted close and intertwined with brush; or of thick posts with holes bored through, having rails, usually two or three to the panel, thrust into the openings; or of trimmed trees placed end to end, with the branches driven into the ground. The third, or military type, is a trench and bank of earth; but the trench is adequate only if it can hold all the rain water, or has a slope sufficient to enable it to drain the water off the land. [3] The bank is serviceable which is close to the ditch on the inside, or so steep that it is not easy to climb. This type of enclosure is usually built along public roads and along streams. At several points along the Via Salaria, in the district of Crustumeria, one may see banks combined with trenches to prevent the river from injuring the fields. Banks built without trenches, such as occur in the district of Reate, are sometimes called walls. [4] The fourth and last type of fence, that of masonry, is a wall, and there are usually four varieties: that which is built of stone, such as occurs in the district of Tusculum; that of burned brick, such as occurs in the Ager Gallicus; that of sun-dried brick, such as occurs in the Sabine country; and that formed of earth and gravel in mounds, such as occurs in Spain and the district of Tarentum.

XV.

Praeterea sine saeptis fines praedi satione arborum tutiores fiunt, ne familiae rixent[ur] cum vicinis ac limites ex litibus iudicem quaerant. Serunt alii

circum pinos, ut habet uxor in Sabinis, alii cupressos, ut ego habui in Vesuvio, alii ulmos, ut multi habent in Crustumino: ubi id pote, ut ibi, quod est campus, nulla potior serenda, quod maxime fructuosa, quod et sustinet saepe ac cogit aliquot corbularum uvarum et frondem iucundissimam ministrat ovibus ac bubus ac virgas praebet saepibus et foco ac furno. Scrofa, Igitur primum haec, quae dixi, quattuor videnda agricolae, de fundi forma, de terrae natura, de modo agri, de finibus tuendis.

[15.1] “Furthermore, if there are no enclosures, the boundaries of the estate are made more secure by the planting of trees, which prevent the servants from quarrelling with the neighbours, and make it unnecessary to fix the boundaries by lawsuits. Some plant pines around the edges, as my wife has done on her Sabine farms; others plant cypresses, as I did on my place on Vesuvius; and still others plant elms, as many have done near Crustumeria. Where that is possible, as it is there because it is a plain, there is no tree better for planting; it is extremely profitable, as it often supports and gathers many a basket of grapes, yields a most agreeable foliage for sheep and cattle, and furnishes rails for fencing, and wood for hearth and furnace.

“These points, then, which I have discussed,” continued Scrofa, “are the four which are to be observed by the farmer: the topography of the land, the nature of the soil, the size of the plot, and the protection of the boundaries.

XVI.

Relinquitur altera pars, quae est extra fundum, cuius appendices et vehementer pertinent ad culturam propter adfinitatem. Eius species totidem: si vicina regio est infesta; si quo neque fructus nostros exportare expediat neque inde quae opus sunt adportare; tertium, si viae aut fluvii, qua portetur, aut non sunt aut idonei non sunt; quartum, siquid ita est in confinibus fundis, ut nostris agris prosit aut noceat. E quis quattuor quod est primum, refert infesta regio sit necne. Multos enim agros egregios colere non expedit propter latrocinia vicinorum, ut in Sardinia quosdam, qui sunt prope Oelium, et in Hispania prope Lusitaniam. Quae vicinitatis invectos habent idoneos, quae ibi nascuntur ubi vendant, et illinc invectos opportunos quae in fundo opus sunt, propter ea fructuosa. Multi enim habent, in praediis quibus frumentum aut vinum aliudve quid desit, importandum; contra non pauci, quibus aliquid sit exportandum. Itaque sub urbe colere hortos late expedit, sic violaria ac rosaria, item multa quae urbs recipit, cum eadem in longinquo praedio, ubi non sit quo deferri possit venale, non expediat colere. Item si ea oppida aut vici in vicinia aut etiam divitum copiosi agri ac villae, unde non care emere possis quae opus sunt in fundum, quibus quae supersint venire possint, ut quibusdam pedamenta aut perticae aut harundo, fructuosior fit fundus, quam si longe sint importanda, non numquam etiam, quam si colendo in tuo ea parare possis. Itaque in hoc genus coloni potius anniversarios habent vicinos,

quibus imperent, medicos, fullones, fabros, quam in villa suos habeant, quorum non numquam unius artificis mors tollit fundi fructum. Quam partem lati fundi divites domesticae copiae mandare solent. Si enim a fundo longius absunt oppida aut vici, fabros parant, quos habeant in villa, sic ceteros necessarios artifices, ne de fundo familia ab opere discedat ac profestis diebus ambulet feriata potius, quam opere faciendo agrum fructuosiore reddat. Itaque ideo Sasernae liber praecipit, nequis de fundo exeat praeter vilicum et promum et unum, quem vilicus legat; siquis contra exierit, ne impune abeat; si abierit, ut in vilicum animadvertatur. Quod potius ita praecipendum fuit, nequis iniussu vilici exierit, neque vilicus iniussu domini longius, quam ut eodem die rediret, neque id crebrius, quam opus esset fundo. Eundem fundum fructuosiore faciunt vecturae, si viae sunt, qua plaustra agi facile possint, aut flumina propinqua, qua navigari possit, quibus utrisque rebus evehi atque invehi ad multa praedia scimus. Refert etiam ad fundi fructus, quem ad modum vicinus in confinio consitum agrum habeat. Si enim ad limitem querquetum habet, non possis recte secundum eam silvam serere oleam, quod usque eo est contrarium natura, ut arbores non solum minus ferant, sed etiam fugiant, ut introrsum in fundum se reclinent, ut vitis adsita ad holus facere solet. Ut quercus, sic iugulandes magnae et crebrae finitimae fundi oram faciunt sterilem.

[16.1] “It remains to discuss the second topic, the conditions surrounding the farm, for they too vitally concern agriculture because of their relation to it. These considerations are the same in number: whether the neighbourhood is unsafe; whether it is such that it is not profitable to transport our products to it, or to bring back from it what we need; third, whether roads or streams for transportation are either wanting or inadequate; and fourth, whether conditions on the neighbouring farms are such as to benefit or injure our land.

[2] Taking up the first of the four: the safety or lack of safety of the neighbourhood is important; for there are many excellent farms which it is not advisable to cultivate because of the brigandage in the neighbourhood, as in Sardinia certain farms near . . . , and in Spain on the borders of Lusitania. Farms which have near by suitable means of transporting their products to market and convenient means of transporting thence those things needed on the farm, are for that reason profitable. For many have among their holdings some into which grain or wine or the like which they lack must be brought, and on the other hand not a few have those from which a surplus must be sent away. [3] And so it is profitable near a city to have gardens on a large scale; for instance, of violets and roses and many other products for which there is a demand in the city; while it would not be profitable to raise the same products on a distant farm where there is no market to which its products can be carried. Again, if there are towns or villages in the neighbourhood, or even well-furnished lands and farmsteads of rich owners, from which you can purchase at a reasonable price what you need for the farm, and to which you can sell your surplus, such as props, or poles, or reeds, the farm will be more

profitable than if they must be fetched from a distance; sometimes, in fact, more so than if you can supply them yourself by raising them on your own place. [4] For this reason farmers in such circumstances prefer to have in their neighbourhood men whose services they can call upon under a yearly contract — physicians, fullers, and other artisans — rather than to have such men of their own on the farm; for sometimes the death of one artisan wipes out the profit of a farm. This department of a great estate rich owners are wont to entrust to their own people; for if towns or villages are too far away from the estate, they supply themselves with smiths and other necessary artisans to keep on the place, so that their farm hands may not leave their work and lounge around holiday-making on working days, rather than make the farm more profitable by attending to their duties. [5] It is for this reason, therefore, that Saserna's book lays down the rule that no person shall leave the farm except the overseer, the butler, and one person whom the overseer may designate; if one leaves against this rule he shall not go unpunished, and if he does, the overseer shall be punished. The rule should rather be stated thus: that no one shall leave the farm without the direction of the overseer, nor the overseer without the direction of the master, on an errand which will prevent his return this day, and that no oftener than is necessary for the farm business. [6] A farm is rendered more profitable by convenience of transportation: if there are roads on which carts can easily be driven, or navigable rivers near by. We know that transportation to and from many farms is carried on by both these methods. The manner in which your neighbour keeps the land on the boundary planted is also of importance to your profits. For instance, if he has an oak grove near the boundary, you cannot well plant olives along such a forest; for it is so hostile in its nature that your trees will not only be less productive, but will actually bend so far away as to lean inward toward the ground, as the vine is wont to do when planted near the cabbage. As the oak, so large numbers of large walnut trees close by render the border of the farm sterile.

XVII.

De fundi quattuor partibus, quae cum solo haerent, et alteris quattuor, quae extra fundum sunt et ad culturam pertinent, dixi. Nunc dicam, agri quibus rebus colantur. Quas res alii dividunt in duas partes, in homines et adminicula hominum, sine quibus rebus colere non possunt; alii in tres partes, instrumenti genus vocale et semivocale et mutum, vocale, in quo sunt servi, semivocale, in quo sunt boves, mutum, in quo sunt plaustra. Omnes agri coluntur hominibus servis aut liberis aut utrisque: liberis, aut cum ipsi colunt, ut plerique pauperculi cum sua progenie, aut mercennariis, cum conducticiis liberorum operis res maiores, ut vindemias ac faenisicia, administrant, iique quos obaerarios nostri vocitarunt et etiam nunc sunt in Asia atque Aegypto et in Illyrico complures. De quibus universis hoc dico, gravia loca utilius esse mercennariis colere quam servis, et in salubribus quoque locis opera rustica

maiora, ut sunt in condendis fructibus vindemiae aut messis. De iis, cuius modi esse oporteat, Cassius scribit haec: operarios parandos esse, qui laborem ferre possint, ne minores annorum XXII et ad agri culturam dociles. Eam coniecturam fieri posse ex aliarum rerum imperatis, et in eo eorum e noviciis requisitione, ad priorem dominum quid factitarint.

Mancipia esse oportere neque formidulosa neque animosa. Qui praesint esse oportere, qui litteris atque aliqua sint humanitate imbuti, frugi, aetate maiore quam operarios, quos dixi. Facilius enim iis quam qui minore natu sunt dicto audientes. Praeterea potissimum eos praeesse oportere, qui periti sint rerum rusticarum. Non solum enim debere imperare, sed etiam facere, ut facientem imitetur et ut animadvertat eum cum causa sibi praeesse, quod scientia praestet. Neque illis concedendum ita imperare, ut verberibus coerceant potius quam verbis, si modo idem efficere possis. Neque eiusdem nationis plures parandos esse: ex eo enim potissimum solere offensiones domesticas fieri. Praefectos alacriores faciendum praemiis dandaque opera ut habeant peculium et coniunctas conservas, e quibus habeant filios. Eo enim fiunt firmiores ac coniunctiores fundo. Itaque propter has cognationes Epiroticae familiae sunt inlustriores ac cariores. Inliciendam voluntatem praefectorum honore aliquo habendo, et de operariis qui praestabunt alios, communicandum quoque cum his, quae facienda sint opera, quod, ita cum fit, minus se putant despici atque aliquo numero haberi a domino. Studiosiores ad opus fieri liberalius tractando aut cibariis aut vestitu largiore aut remissione operis concessioneve, ut peculiare aliquid in fundo pascere liceat, huiusce modi rerum aliis, ut quibus quid gravius sit imperatum aut animadversum qui, consolando eorum restituat voluntatem ac benevolentiam in dominum.

[17.1] "I have now discussed the four divisions of the estate which are concerned with the soil, and the second four, which are exterior to the soil but concern its cultivation; now I turn to the means by which land is tilled. Some divide these into two parts: men, and those aids to men without which they cannot cultivate; others into three: the class of instruments which is articulate, the inarticulate, and the mute; the articulate comprising the slaves, the inarticulate comprising the cattle, and the mute comprising the vehicles. [2] All agriculture is carried on by men — slaves, or freemen, or both; by freemen, when they till the ground themselves, as many poor people do with the help of their families; or hired hands, when the heavier farm operations, such as the vintage and the haying, are carried on by the hiring of freemen; and those whom our people called *obaerarii* and of whom there are still many in Asia, in Egypt, and in Illyricum. [3] With regard to these in general this is my opinion: it is more profitable to work unwholesome lands with hired hands than with slaves; and even in wholesome places it is more profitable thus to carry out the heavier farm operations, such as storing the products of the vintage or harvest. As to the character of such hands Cassius gives this advice: that such hands should be selected as can bear heavy work, are not less than twenty-two

years old, and show some aptitude for farm labour. You may judge of this by the way they carry out their other orders, and, in the case of new hands, by asking one of them what they were in the habit of doing for their former master.

“Slaves should be neither cowed nor high-spirited. [4] They ought to have men over them who know how to read and write and have some little education, who are dependable and older than the hands whom I have mentioned; for they will be more respectful to these than to men who are younger. Furthermore, it is especially important that the foremen be men who are experienced in farm operations; for the foreman must not only give orders but also take part in the work, so that his subordinates may follow his example, and also understand that there is good reason for his being over them — the fact that he is superior to them in knowledge. [5] They are not to be allowed to control their men with whips rather than with words, if only you can achieve the same result. Avoid having too many slaves of the same nation, for this is a fertile source of domestic quarrels. The foremen are to be made more zealous by rewards, and care must be taken that they have a bit of property of their own, and mates from among their fellow-slaves to bear them children; for by this means they are made more steady and more attached to the place. Thus, it is on account of such relationships that slave families of Epirus have the best reputation and bring the highest prices. [6] The good will of the foremen should be won by treating them with some degree of consideration; and those of the hands who excel the others should also be consulted as to the work to be done. When this is done they are less inclined to think that they are looked down upon, and rather think that they are held in some esteem by the master. [7] They are made to take more interest in their work by being treated more liberally in respect either of food, or of more clothing, or of exemption from work, or of permission to graze some cattle of their own on the farm, or other things of this kind; so that, if some unusually heavy task is imposed, or punishment inflicted on them in some way, their loyalty and kindly feeling to the master may be restored by the consolation derived from such measures.

XVIII.

De familia Cato derigit ad duas metas, ad certum modum agri et genus sationis, scribens de olivetis et vineis ut duas formulas: unam, in qua praecipit, quo modo olivetum agri iugera CCXL instruere oporteat. Dicit enim in eo modo haec mancipia XIII habenda, vilicum, vilicam, operarios V, bubulcos III, asinarium I, subulcum I, opilionem I. Alteram formulam scribit de vinearum iugeribus C, ut dicat haberi oportere haec XV mancipia, vilicum, vilicam, operarios X, bubulcum, asinarium, subulcum. Saserna scribit satis esse ad iugera VIII hominem unum: ea debere eum confodere diebus XLV tametsi quaternis operis singula iugera possit; sed relinquere se operas XIII valetudini, tempestati, inertiae, indiligentiae. Horum neuter satis dilucide

modulos reliquit nobis, quod Cato si voluit, debuit sic, ut pro portione ad maiorem fundum et minorem adderemus et demeremus. Praeterea extra familiam debuit dicere vilicum et vilicam. Neque enim, si minus CCXL iugera oliveti colas, non possis minus uno vilico habere, nec, si bis tanto ampliozem fundum aut eo plus colas, ideo duo vilici aut tres habendi. Fere operarii modo et bubulci pro portione addendi ad maioris modos fundorum, ii quoque, si similis est ager. Sin est ita dissimilis, ut arari non possit, quod sit confragosus atque arduis clivis, minus multi opus sunt boves et bubulci. Mitto illut, quod modum neque unum nec modicum proposuit CCXL iugerum (modicus enim centuria, et ea CC iugerum), e quo quom sexta pars sit ea XL, quae de CCXL demuntur, non video quem ad modum ex eius praecepto demam sextam partem et de XIII mancipiis, nihilo magis, si vilicum et vilicam removero, quem ad modum ex XI sextam partem demam. Quod autem ait in C iugeribus vinearum opus esse XV mancipia, siquis habeat centuriam, quae dimidium vineti, dimidium oliveti, sequetur ut duo vilicos et duas vilicas habeat, quod est deridiculum. Quare alia ratione modus mancipiorum generatim est animadvertendus et magis in hoc Saserna probandus, qui ait singula iugera quaternis operis uno operario ad conficiendum satis esse. Sed si hoc in Sasernae fundo in Gallia satis fuit, non continuo idem in agro Ligusco montano. Itaque de familiae magnitudine et reliquo instrumento commodissime scies quantam pares, si tria animadverteris diligenter: in vicinitate praedia cuius modi sint et quanta, et quot quaeque hominibus colantur, et quot additis operis aut demptis melius aut deterius habeas cultum. Bivium nobis enim ad culturam dedit natura, experientiam et imitationem. Antiquissimi agricolae temptando pleraque constituerunt, liberi eorum magnam partem imitando. Nos utrumque facere debemus, et imitari alios et aliter ut faciamus experientia temptare quaedam, sequentes non aleam, sed rationem aliquam: ut si altius repastinaverimus aut minus quam alii, quod momentum ea res habeat, ut fecerunt ii in sariendo iterum et tertio, et qui insitiones ficulnas ex verno tempore in aestivum contulerunt.

[18.1] “With regard to the number of slaves required, Cato has in view two bases of calculation: the size of the place, and the nature of the crop grown. Writing of oliveyards and vineyards, he gives two formulas. The first is one in which he shows how an oliveyard of 240 iugera should be equipped; on a place of this size he says that the following thirteen slaves should be kept: an overseer, a housekeeper, five labourers, three teamsters, one muleteer, one swineherd, one shepherd. The second he gives for a vineyard of 100 iugera, on which he says should be kept the following fifteen slaves: an overseer, a housekeeper, ten labourers, a teamster, a muleteer, a swineherd. [2] Saserna states that one man is enough for eight iugera, and that he ought to dig over that amount in forty-five days, although he can dig over a single iugerum with four days’ work; but he says that he allows thirteen days extra for such things as illness, bad weather, idleness, and laxness. [3] Neither of these writers has left us a very clearly expressed rule. For if Cato wished to do this, he should

have stated it in such a way that we add or subtract from the number proportionately as the farm is larger or smaller. Further, he should have named the overseer and the housekeeper outside of the number of slaves; for if you cultivate less than 240 iugera of olives you cannot get along with less than one overseer, nor if you cultivate twice as large a place or more will you have to keep two or three overseers. [4] It is only the labourers and teamsters that are to be added proportionately to larger bodies of land; and even then only if the land is uniform. But if it is so varied that it cannot all be ploughed, as, for instance, if it is very broken or very steep, fewer oxen and teamsters will be needed. I pass over the fact that the 240 iugera instanced is a plot which is neither a unit nor standard (the standard unit is the century, containing 200 iugera); [5] when one-sixth, or 40 iugera, is deducted from this 240, I do not see how, according to his rule, I shall take one-sixth also from thirteen slaves, or, if I leave out the overseer and the housekeeper, how I shall take one-sixth from the eleven. As to his saying that on 100 iugera of vineyard you should have fifteen slaves; if one has a century, half vineyard and half oliveyard, it will follow that he should have two overseers and two housekeepers, which is absurd. [6] Wherefore the proper number and variety of slaves must be determined by another method, and Saserna is more to be approved in this matter; he says that each iugerum is enough to furnish four days' work for one hand. But if this applied to Saserna's farm in Gaul, it does not necessarily follow that the same would hold good for a farm in the mountains of Liguria. Therefore you will most accurately determine the number of slaves and other equipment which you should provide [7] if you observe three things carefully: the character of the farms in the neighbourhood and their size; the number of hands employed on each; and how many hands should be added or subtracted in order to keep your cultivation better or worse. For nature has given us two routes to agriculture, experiment and imitation. The most ancient farmers determined many of the practices by experiment, their descendants for the most part by imitation. [8] We ought to do both — imitate others and attempt by experiment to do some things in a different way, following not chance but some system: as, for instance, if we plough a second time, more or less deeply than others, to see what effect this will have. This was the method they followed in weeding a second and third time, and those who put off the grafting of figs from spring-time to summer.

XIX.

De reliqua parte instrumenti, quod semivocale appellavi, Saserna ad iugera CC arvi boum iuga duo satis esse scribit, Cato in olivetis CCXL iugeris boves trinos. Ita fit ut, si Saserna dicit verum, ad C iugera iugum opus sit, si Cato, ad octogena. Sed ego neutrum modum horum omnem ad agrum convenire puto et utrumque ad aliquem. Alia enim terra faciliior aut difficilior est: aliam terram boves proscindere nisi magnis viribus non possunt et saepe fracta bura relinquunt vomerem in arvo. Quo sequendum nobis in singulis fundis, dum

sumus novicii, triplici regula, superioris domini instituto et vicinorum et experientia quadam. Quod addit asinos qui stercus vectent tres, asinum molarium, in vinea iugerum C iugum boum, asinorum iugum, asinum molendarium: in hoc genere semivocalium adiciendum de pecore ea sola quae agri colendi causa erunt et quae solent esse pecuaria pauca habenda, quo facilius mancipia se tueri et assidua esse possint. In eo numero non modo qui prata habent, ut potius oves quam sues habeant curant, sed etiam qui non solum pratorum causa habent, propter stercus. De canibus vero utique, quod villa sine iis parum tuta.

[19.1] “With regard to the second division of equipment, to which I have given the name of inarticulate, Saserna says that two yoke of oxen are enough for 200 iugera of cultivated land, while Cato states that three yoke are needed for 240 iugera of olive-yard. Hence, if Saserna is right, one yoke is needed for every 100 iugera; if Cato is right, one of every 80. My own opinion is that neither of these standards will fit every piece of land, and that each will fit some particular piece. One piece, for instance, may be easier or harder to work than another, [2] and there are places which oxen cannot break unless they are unusually powerful, and frequently they leave the plough in the field with broken beam. Wherefore on each farm, so long as we are unacquainted with it, we should follow a threefold guide: the practice of the former owner, the practice of neighbouring owners, and a degree of experimentation. [3] As to his addition of three donkeys to haul manure and one for the mill (for a vineyard of 100 iugera, a yoke of oxen, a pair of donkeys, and one for the mill); under this head of inarticulate equipment it is to be added that of other animals only those that are to be kept which are of service in agriculture, and the few which are usually allowed as the private property of the slaves for their more comfortable support and to make them more diligent in their work. Of such animals, not only owners who have meadows prefer to keep sheep rather than swine because of their manure, but also those who keep animals for other reasons than the benefit of the meadows. As to dogs, they must be kept as a matter of course, for no farm is safe without them.

XX.

Igitur de omnibus quadrupedibus prima est probatio, qui idonei sint boves, qui arandi causa emuntur. Quos rudis neque minoris trimos neque maioris quadrimos parandum: ut viribus magnis sint ac pares, ne in opere firmior inbecillioem conficiat: amplis cornibus et nigris potius quam aliter ut sint, lata fronte, naribus simis, lato pectore, crassis coxendicibus. Hos veteranos ex campestribus locis non emendum in dura ac montana, nec non contra si incidit, ut sit vitandum. Novellos cum quis emerit iuvenco, si eorum colla in furcas destitutas incluserit ac dederit cibum, diebus paucis erunt mansueti et ad domandum proni. Tum ita subigendum, ut minutatim adsuefaciant et ut tironem cum veterano adiungant (imitando enim facilius domatur), et primum

in aequo loco et sine aratro, tum eo levi, principio per harenam aut molliorem terram. Quos ad vecturas, item instituendum ut inania primum ducant plaustra et, si possis, per vicum aut oppidum: creber crepitus ac varietas rerum consuetudine celeberrima ad utilitatem adducit. Neque pertinaciter, quem feceris dextrum, in eo manendum, quod, si alternis fit sinister, fit laboranti in alterutra parte requies. Ubi terra levis, ut in Campania, ibi non bubus gravibus, sed vaccis aut asinis quod arant, eo facilius ad aratrum leve adduci possunt, ad molas et ad ea, siquae sunt, quae in fundo convehuntur. In qua re alii asellis, alii vaccis ac mulis utuntur, exinde ut pabuli facultas est; Nam facilius asellus quam vacca alitur, sed fructuosior haec. In eo agricolae hoc spectandum, quo fastigio sit fundus. In confragoso enim haec ac difficili valentiora parandum et potius ea quae per se fructum reddere possint, cum idem operis faciant.

[20.1] “The first consideration, then, in the matter of quadrupeds, is the proper kind of ox to be purchased for ploughing. You should purchase them unbroken, not less than three years old and not more than four; they should be powerful and equally matched, so that the stronger will not exhaust the weaker when they work together; they should have large horns, black for choice, a broad face, flat nose, deep chest, and heavy quarters. [2] Oxen that have reached maturity on level ground should not be bought for rough and mountainous country; moreover, if the opposite happens to be the case, it should be avoided. When you have bought young steers, if you will fasten forked sticks loosely around their necks and give them food, within a few days they will grow gentle and fit for breaking to the plough. This breaking should consist in letting them grow accustomed to the work gradually, in yoking the raw ox to a broken one (for the training by imitation is easier), and in driving them first on level ground without a plough, then with a light one, and at first in sandy or rather light soil. [3] Draught cattle should be trained in a similar way, first drawing an empty cart, and if possible through a village or town. The constant noise and the variety of objects, by frequent repetition, accustom them to their work. The ox which you have put on the right should not remain continuously on that side, because if he is changed in turn to the left, he finds rest by working on alternate sides. [4] In light soils, as in Campania, the ploughing is done, not with heavy steers, but with cows or donkeys; and hence they can more easily be adapted to a light plough or a mill, and to doing the ordinary hauling of the farm. For this purpose some employ donkeys, others cows or mules, according to the fodder available; for a donkey requires less feed than a cow, but the latter is more profitable. [5] In this matter the farmer must keep in mind the conformation of his land; in broken and heavy land stronger animals must be got, and preferably those which, while doing the same amount of work, can themselves return some profit.

Canes potius cum dignitate et acres paucos habendum quam multos, quos consuefacias potius noctu vigilare et interdiu clausos dormire. De indomitis quadripedibus ac pecore faciendum: si prata sunt in fundo neque pecus habet, danda opera ut pabulo vendito alienum pecus in suo fundo pascat ac stabulet.

[21.1] “As to dogs, you should keep a few active ones of good traits rather than a pack, and train them rather to keep watch at night and sleep indoors during the day. With regard to unbroken animals and flocks; if the owner has meadow-lands on the farm and no cattle, the best practice is, after selling the forage, to feed and fold the flocks of a neighbour on the farm.

XXII.

De reliquo instrumento muto, in quo sunt corbulae, dolia, sic alia, haec praecipienda. Quae nasci in fundo ac fieri a domesticis poterunt, eorum nequid ematur, ut fere sunt quae ex viminibus et materia rustica fiunt, ut corbes, fiscinae, tribula, valli, rastelli; sic quae fiunt de cannabi, lino, iunco, palma, scirpo, ut funes, restes, tegetes. Quae e fundo sumi non poterunt, ea si empta erunt potius ad utilitatem quam ob speciem, sumptu fructum non extenuabunt; eo magis, si inde empta erunt potissimum, ubi ea et bona et proxime et vilissimo emi poterunt. Cuius instrumenti varia discrimina ac multitudo agri magnitudine finitur, quod plura opus sunt, si fines distant late. Itaque, Stolo inquit, proposita magnitudine fundi de eo genere Cato scribit, oliveti iugera CCXL qui coleret, eum instruere ita oportere, ut faceret vasa olearia iuga quinque, quae membratim enumerat, ut ex aere ahenea, urceos, nassiternam, item alia: sic e ligno et ferro, ut plostra maiora tria, aratra cum vomeribus sex, crates stercorarias quattuor, item alia; sic de ferramentis quae sint et qua opus multitudine, ut ferreas octo, sarcula totidem, dimidio minus palas, item alia. Item alteram formulam instrumenti fundi vinarii fecit, in qua scribit, si sit C iugerum, habere oportere vasa torcularia instructa trina, dolia cum operculis culleorum octingentorum, acinaria viginti, frumentaria viginti, item eius modi alia. Quae minus multa quidem alii, sed tantum numerum culleorum scripsisse puto, ne cogeretur quotannis vendere vinum. Vetera enim quam nova et eadem alio tempore quam alio pluris. Item sic de ferramentorum varietate scribit permulta, et genere et multitudine qua sint, ut falces, palas, rastros, sic alia, quorum non nulla genera species habent plures, ut falces. Nam dicuntur ab eodem scriptore vineaticae opus esse XL, sirpiculae V, silvaticae V, arborariae III, rustariae X. Hic haec. At Scrofa, Instrumentum et supellectilem rusticam omnem oportet habere scriptam in urbe et rure dominum, vilicum contra ea ruri omnia certo suo quoque loco ad villam esse posita; quae non possunt esse sub clavi, quam maxime facere ut sint in conspectu oportet, eo magis ea quae in rariore sunt usu, ut quibus in vindemia utuntur et corbulae, et sic alia. Quae enim res cotidie videntur, minus metuunt furem.

[22.1] “With regard to the rest of the equipment— ‘the mute’, a term which includes baskets, jars, and the like — the following rules may be laid down: nothing should be bought which can be raised on the place or made by men on the farm, in general articles which are made of withes and of wood, such as hampers, baskets, threshing-sledges, fans, and rakes; so too articles which are made of hemp, flax, rush, palm fibre, and bulrush, such as ropes, cordages, and mats. [2] Articles which cannot be got from the place, if purchased with a view to utility rather than for show, will not cut too deeply into the profits; and the more so if care is taken to buy them where they can be had of good quality, near by and at the same lowest price. The several kinds of such equipment and their number are determined by the size of the place, more being needed if the farm is extensive. [3] Accordingly,” said Stolo, “under this head Cato, fixing a definite size for his farm, writes that one who had under cultivation 240 iugera of olive land should equip it by assembling five complete sets of oil-pressing equipment; and he itemizes such equipment, as, copper kettles, pots, a pitcher with three spouts, and so forth; then implements made of wood and iron, as three large carts, six ploughs and ploughshares, four manure hampers, and so forth; then the kind and number of iron tools needed, as eight forks, as many hoes, half as many shovels, and so forth. [4] He likewise gives a second schedule for a vineyard, in which he writes that if it be one of 100 iugera it should have three complete pressing equipments, vats and covers to hold 800 cullei, twenty grape hampers, twenty grain hampers, and other like implements. Other authorities, it is true, give smaller numbers, but I imagine he fixed the number of cullei so high in order that the farmer might not be forced to sell his wine every year; for old wine brings a better price than new, and the same wine a better price at one time than at another. [5] He likewise says much of the several kinds of tools, giving the kind and number needed, such as hooks, shovels, harrows, and so forth; some classes of which have several subdivisions, such as the hooks — thus the same author says there will be needed forty pruning-hooks for vines, five for rushes, three for trees, ten for brambles.” So far Stolo; [6] and Scrofa resumed: “The master should keep, both in town and on the place, a complete inventory of tools and equipment of the farm, while the overseer on the place should keep all tools stored near the steading, each in its own place. Those that cannot be kept under lock and key he should manage to keep in sight so far as possible, and especially those that are used only at intervals; for instance, the implements which are used at vintage, such as baskets and the like; for articles which are seen every day run less risk from the thief.”

XXIII.

Suscipit Agrasius, Et quoniam habemus illa duo prima ex divisione quadripartita, de fundo et de instrumento, quo coli solet, de tertia parte expecto. Scrofa, Quoniam fructum, inquit, arbitror esse fundi eum qui ex eo satus nascitur utilis ad aliquam rem, duo consideranda, quae et quo quidque

loco maxime expediat serere. Alia enim loca adposita sunt ad faenum, alia ad frumentum, alia ad vinum, alia ad oleum, sic ad pabulum quae pertinent, in quo est ocinum, farrago, vicia, medica, cytiscum, lupinum. Neque in pingui terra omnia seruntur recte neque in macra nihil. Rectius enim in tenuiore terra ea quae non multo indigent suco, ut cytisum et legumina praeter cicer; hoc enim quoque legumen, ut cetera quae velluntur e terra, non subsecantur, quae, quod ita leguntur, legumina dicta. In pingui rectius quae cibi sunt maioris, ut holus, triticum, siligo, linum. Quaedam etiam serenda non tam propter praesentem fructum quam in annum prospicientem, quod ibi subsecta atque relictia terram faciunt meliorem. Itaque lupinum, cum minus siliculam cepit, et non numquam fabalia, si ad siliquas non ita pervenit, ut fabam legere expediat, si ager macrior est, pro stercore inarare solent. Nec minus ea discriminanda in conserendo quae sunt fructuosa, propter voluptatem, ut quae pomaria ac floralia appellantur, item illa quae ad hominum victum ac sensum delectationemque non pertinent neque ab agri utilitate sunt diiuncta. Idoneus locus eligendus, ubi facias salictum et harundinetum, sic alia quae umidum locum quaerunt, contra ubi segetes frumentarias, ubi fabam potissimum seras, item alia quae arida loca secuntur: sic ut umbrosis locis alia seras, ut corrudam, quod ita petit asparagus; aprica, ut ibi seras violam et hortos facias, quod ea sole nutricantur, sic alia. Et alio loco virgulta serenda, ut habeas vimina, unde viendo quid facias, ut sirpeas, vallus, crates; alio loco ut seras ac colas silvam caeduum, alio ubi aucupere, sic ubi cannabim, linum, iuncum, spartum, unde nectas bubus soleas, lineas, restis, funes. Quaedam loca eadem alia ad serendum idonea. Nam et in recentibus pomariis dissitis seminibus in ordinemque arbusculis positis primis annis, antequam radices longius procedere possint, alii conserunt hortos, alii quid aliud, neque cum convaluerunt arbores, idem faciunt, ne violent radices.

[23.1] Agrasius remarked: "And since we have the first two of the fourfold division, the farm and the equipment with which it is usually worked, I am waiting for the third topic." "Since I hold," continued Scrofa, "that the profit of the farm is that which arises from it as the result of planting for a useful purpose, two items are to be considered: what it is most expedient to plant and in what place. For some spots are suited to hay, some to grain, others to vines, others to olive, and so of forage crops, including clover, mixed forage, vetch, alfalfa, snail clover, and lupines. [2] It is not good practice to plant every kind of crop on rich soil, nor to plant nothing on poor soil; for it is better to plant in thinner soil those crops which do not need much nutriment, such as clover and the legumes, except the chick pea, which is also a legume, as are all those plants which are pulled from the ground and not mowed, and are called legumes from the fact that they are 'gathered' (leguntur) in this way. In rich soil it is better to plant those requiring more food, as cabbage, wheat, winter wheat, and flax. [3] Some crops are also to be planted not so much for the immediate return as with a view to the year later, as when cut down and left on the ground they enrich it. Thus, it is customary to plough under lupines as

they begin to pod — and sometimes field beans before the pods have formed so far that it is profitable to harvest the beans — in place of dung, if the soil is rather thin. [4] And also in planting selection should be made of those things which are profitable for the pleasure they afford, such as those plots which are called orchards and flower gardens, and also of those which do not contribute either to the sustenance of man or to the pleasure of his senses, but are not without value to the farm. So a suitable place is to be chosen for planting a willow bed and a reed thicket, [5] together with other plants which prefer humid ground; and on the other hand places best suited for planting grain crops, beans, and other plants which like dry ground. Similarly, you should plant some crops in shady spots, as, for instance, the wild asparagus, because the asparagus prefers that type; while sunny ground should be chosen for planting violets and laying out gardens, as these flourish in the sun, and so forth. In still another place should be planted thickets, so that you may have withes with which to weave such articles as wicker wagon bodies, winnowing baskets, and hampers; and in another plant and tend a wood-lot, [6] in another a wood for fowling; and have a place for hemp, flax, rush, and Spanish broom, from which to make shoes for cattle, thread, cord, and rope. Some places are suitable at the same time for the planting of other crops; thus in young orchards, when the seedlings have been planted and the young trees have been set in rows, during the early years before the roots have spread very far, some plant garden crops, and others plant other crops; but they do not do this after the trees have gained strength, for fear of injuring the roots.”

XXIV.

Stolo, Quod ad haec pertinet, Cato non male, quod scribit de sationibus, ager crassus et laetus si sit sine arboribus, eum agrum frumentarium fieri oportere; idem ager si nebulosus sit, rapa, raphanos, milium, panicum; in agro crasso et calido oleam conditaneam, radium maiorem, Sallentinam, orcitem, poseam, Sergianam, Colminiam, albicerem, quam earum in iis locis optimam dicant esse, eam maxime serere. Agrum oliveto conserendo, nisi qui in ventum favonium spectet et soli ostentus sit, alium bonum nullum esse. Qui ager frigidior et macrior sit, ibi oleam licinianam seri oportere. Si in loco crasso aut calido posueris, hostum nequam fieri et ferendo arborem perire et muscum rubrum molestum esse. Hostum vocant quod ex uno facto olei reficitur. Factum dicunt quod uno tempore conficiunt, quem alii CLX aiunt esse modiorum, alii ita minus magnum, ut ad CXX descendat, exinde ut vasa olearia quot et quanta habeant, quibus conficiunt illud. Quod Cato ait circum fundum ulmos et populos, unde frons ovibus et bubus sit et materies, seri oportere (sed hoc neque in omnibus fundis opus est neque, in quibus est opus, propter frondem maxime), sine detrimento ponuntur a septemtrionali parte, quod non officiant soli.

Ille adicit ab eodem scriptore, si locus umectus sit, ibi cacumina populorum

serenda et harundinetum. Id prius bipalio verti, ibi oculos harundinis pedes ternos alium ab alio seri, * * * aptam esse utrique eandem fere culturam. Salicem Graecam circum harundinetum seri oportere, uti sit qui vitis alligari possit.

[24.1] “What Cato says about planting,” said Stolo, “is very much to the point on this subject: ‘Soil that is heavy, rich, and treeless should be used for grain; and the same soil, if subject to fogs, should preferably be planted in rape, turnips, millet, and panic-grass. In heavy, warm soil plant olives — those for pickling, the long variety, the Sallentine, the orcites, the posea, the Sergian, the Colminian, and the waxy; choose especially the varieties which are commonly agreed to be the best for these districts. Land which is suitable for olive planting is that which faces the west and is exposed to the sun; no other will be good. [2] In colder and thinner soil the Licinian olive should be planted. If you plant it in rich or warm soil the yield will be worthless, the tree will exhaust itself in bearing, and a reddish scale will injure it.’ [3] A hostus is what they call the yield of oil from one factus; and a factus (‘making’) is the amount they make up at one time. Some say this is 160 modii, others reduce it so far as 120 modii, according to the number and size of the equipment they have for making it. As to Cato’s remark that elms and poplars should be planted around the farm to supply leaves for sheep and cattle, and timber (but this is not necessary on all farms, and where it is necessary it is not chiefly for the forage), they may safely be planted on the northern edge, because there they do not cut off the sun.”

[4] Scrofa gave the following advice from the same author: “ ‘Wherever there is wet ground, poplar cuttings and a reed thicket should be planted. The ground should first be turned with the mattock and then the eyes of the reed should be planted three feet apart; . . . the same cultivation is adapted pretty much to each. The Greek willow should be planted along the border of the thicket, so that you may have withes for tying up vines.

XXV.

Vinea quo in agro serenda sit, sic observandum. Qui locus optimus vino sit et ostentus soli, Aminneum minusculum et geminum eugeneum, helvium minusculum seri oportere. Qui locus crassior sit aut nebulosus, ibi Aminneum maius aut Murgentinum, Apicium, Lucanum seri. Ceteras vites, et de iis miscellas maxime, in omne genus agri convenire.

[25.1] ‘Soil for laying out a vineyard should be chosen by the following rules: In soil which is best adapted for grapes and which is exposed to the sun the small Aminnian, the double eugeneum, and the small parti-coloured should be planted; in soil that is heavy or more subject to fogs the large Aminnian, the Murgentian, the Apician, and the Lucanian. The other varieties, and especially the hybrids, grow well anywhere.’

In omni vinea diligenter observant ut ridica vitis ad septemtrionem versus tegatur; et si cupressos vivas, pro ridicis quas inserunt, alternos ordines inponunt neque eos crescere altius quam ridicas patiuntur, neque propter eos ut adserant vites, quod inter se haec inimica.

Agrius Fundanio, Vereor, inquit, ne ante aeditumus veniat huc, quam hic ad quartum actum. Vindemiam enim expecto. Bono animo es, inquit Scrofa, ac fiscinas expedi et urnam.

[26.1] “In every vineyard they are careful to see that the vine is protected toward the north by the prop; and if they plant live cypresses to serve as props they plant them in alternate rows, yet do not allow the rows to grow higher than the props, and are careful not to plant vines near them, because they are hostile to each other.”

“I am afraid,” remarked Agrius to Fundanius, “that the sacristan will come back before our friend comes to the fourth act; for I am awaiting the vintage.” “Be of good cheer,” replied Scrofa, “and get ready the baskets and jar.”

XXVII.

Et quoniam tempora duorum generum sunt, unum annale, quod sol circuitu suo finit, alterum menstruum, quod luna circumiens comprehendit, prius dicam de sole. Eius cursus annalis primum fere circiter ternis mensibus ad fructus est divisus in IIII partis, et idem subtilius sesquimensibus in IIX, in IIII, quod dividitur in ver et aestatem et autumnum et hiemem. Vere sationes quae fiunt, terram rudem proscindere oportet, quae sunt ex ea enata, priusquam ex iis quid seminis cadat, ut sint exradicata; et simul glaebis ab sole percalefactis aptiores facere ad accipiendum imbrem et ad opus faciliores relaxatas; neque eam minus binis arandum, ter melius. Aestate fieri messes oportere, autumno siccis tempestatibus vindemias, ac silvas excoli commodissime tunc, praecidi arbores oportere secundum terram: radices autem primoribus imbribus ut effodiantur, nequid ex iis nasci possit. Hieme putari arbores dumtaxat his temporibus, cum gelu cortices ex imbribus careant et glacie.

[27.1] “And since we have two measures of time, one annual which the sun bounds by its circuit, the other monthly which the moon embraces as it circles, I shall speak first of the sun. Its annual course is divided first into four periods of about three months each up to its completion, and more narrowly into eight periods of a month and a half each; the fourfold division embraces spring, summer, autumn, and winter. [2] For the spring plantings the untilled ground should be broken up so that the weeds which have sprung from it may be rooted up before any seed falls from them; and at the same time, when the clods have been thoroughly dried by the sun, to make them more accessible to

the rain and easier to work when they have been thus broken up; and there should be not less than two ploughings, and preferably three. [3] In summer the grain should be gathered, and in autumn, when the weather is dry, the grapes; and this is the best time for the woods to be cleared, the trees being cut close to the ground, while the roots should be dug out at the time of the early rains, so that they cannot sprout again. In winter trees should be pruned, provided it is done when the bark is free from the chill of rain and ice.

XXVIII.

Dies primus est veris in aquario, aestatis in tauro, autumnus in leone, hiemis in scorpione. Cum unius cuiusque horum IIII signorum dies tertius et vicesimus IIII temporum sit primus et efficiat ut ver dies habeat XCI, aestas XCIV, autumnus XCI, hiems XXCIX, quae redacta ad dies civiles nostros, qui nunc sunt, primi verni temporis ex a. d. VII id. Febr., aestivi ex a. d. VII id. Mai., autumnalis ex a. d. III id. Sextil., hiberni ex a. d. IV id. Nov., suptilius descriptis temporibus observanda quaedam sunt, eaque in partes VIII dividuntur: primum a favonio ad aequinoctium vernum dies XLV, hinc ad vergiliarum exortum dies XLIV, ab hoc ad solstitium dies XLIIX, inde ad caniculae signum dies XXVII, dein ad aequinoctium autumnale dies LXVII, exin ad vergiliarum occasum dies XXXII, ab hoc ad brumam dies LVII, inde ad favonium dies XLV.

[28.1] “The first day of spring occurs [when the sun is] in Aquarius, that of summer when it is in Taurus, of autumn when it is in Leo, of winter when it is in Scorpio. As the twenty-third day of each one of these four signs is the first day of the four seasons, this makes spring contain 91 days, summer 94, autumn 91, winter 89, which numbers, reduced to the official calendar now in force, fix the beginning of spring on February 7, of summer on May 9, of autumn on August 11, of winter on November 10. [2] But in the more exact divisions certain things are to be taken into account, which cause an eightfold division: the first from the rising of the west wind to the vernal equinox, 45 days, thence to the rising of the Pleiades 44 days, thence to the solstice 48 days, thence to the rising of the Dog Star 27 days, thence to the autumnal equinox 67 days, from there to the setting of the Pleiades 32 days, hence to the winter solstice 57 days, and back to the rising of the west wind 45 days.

XXIX.

Primo intervallo inter favonium et aequinoctium vernum haec fieri oportet. Seminaria omne genus ut serantur, putari arbusta, stercorari in pratis, circum vites ablacuari, radices quae in summa terra sunt praecidi, prata purgari, salicta seri, segetes sariri. Seges dicitur quod aratum satum est, arvum quod aratum necdum satum est, novalis, ubi satum fuit, antequam secunda aratione novatur rursus. Terram cum primum arant, proscindere appellant, cum iterum, offringere dicunt, quod prima aratione glaebae grandes solent excitari; cum

iteratur, offringere vocant. Tertio cum arant iacto semine, boves lirare dicuntur, id est cum tabellis additis ad vomerem simul et satum frumentum operiunt in porcis et sulcant fossas, quo pluvia aqua delabatur. Non nulli postea, qui segetes non tam latas habent, ut in Apulia et id genus praediis, per sartores occare solent, siquae in porcis relictæ grandiores sunt glaebae. Qua aratrum vomere lacunam striam fecit, sulcus vocatur. Quod est inter duos sulcos elata terra dicitur porca, quod ea seges frumentum porricit. Sic quoque exta deis cum dabant, porricere dicebant.

[29.1] “These are things which should be done in the first period, from the rising of the west wind to the vernal equinox: — All kinds of nurseries should be set out, orchards pruned, meadows manured, vines trenched and outcropping roots removed, meadows cleared, willow beds planted, grain-land weeded. The word *seges* is used of ploughed land which has been sowed, *arvum* of ploughed land not yet sowed, *novalis* of land where there has been a crop before it is “renewed” (*novatur*) by a second ploughing. [2] When they plough the first time they say they are ‘breaking up,’ the second time that they are ‘breaking down,’ because at the first ploughing large clods are usually turned up, and when the ploughing is repeated they call it ‘breaking down.’ When they plough the third time, after the seed has been broadcast, the oxen are said to ‘ridge’; that is, with mould boards attached to the ploughshare they both cover the broadcast seed in ridges, and at the same time cut ditches to let the rain-water drain off. Some farmers, who have fields which are not very large, as in Apulia and farms of that kind, have the custom later on of breaking up with hoes any large clods which have been left on the ridges. [3] Where the plough makes a hollow or channel with the share, it is called a ‘furrow.’ The space between two furrows, the raised dirt, is called *porca*, because that part of the field presents (*porricit*) the grain; so they also used to employ the word *porricere* when they offered the entrails to the gods.

XXX.

Secundo intervallo inter vernum aequinoctium et vergiliarum exortum haec fieri. Segetes runcari, id est herbam e segetibus expurgari, boves terram proscindere, salicem caedi, prata defendi. Quae superiore tempore fieri oportuerit et non sunt absoluta, antequam gemmas agant ac florescere incipiant, fieri, quod, si quae folia amittere solent ante frondere inceperunt, statim ad serendum idonea non sunt. Oleam seri interputarique oportet.

[30.1] “In the second period, between the vernal equinox and the rising of the Pleiades, these operations should be carried out: — Crops should be weeded, that is, the grass cleared from the crops, oxen should break up the ground, willows should be cut, and meadows fenced. What should have been done in the former period but was not completed should be done before the plants begin to bud and flower, because if those which are deciduous once begin to

frond, they are at once unsuited for planting. Olives should be planted and pruned.

XXXI.

Tertio intervallo inter vergiliarum exortum et solstitium haec fieri debent. Vineas novellas fodere aut arare et postea occare, id est comminuere, ne sit glaeba. Quod ita occidunt, occare dictum. Vites pampinari, sed a sciente (nam id quam putare maius), neque in arbusto, sed in vinea fieri. Pampinare est e sarmento coles qui nati sunt, de iis, qui plurimum valent, primum ac secundum, non numquam etiam tertium, relinquere, reliquos decerpere, ne relictis colibus sarmentum nequeat ministrare sucum. Ideo in vitiario primitus cum exit vitis, tota resicari solet, ut firmiore sarmento e terra exeat atque in pariendis colibus vires habeat maiores. Eiuncidum enim sarmentum propter infirmitatem sterile neque ex se potest eicere vitem, quam vocant minorem flagellum, maiorem et iam unde uvae nascuntur palmam. Prior littera una mutata declinata a venti flatu, similiter ac flabellum flagellum. Posterior, quod ea vitis immittitur ad uvas pariendas, dicta primo videtur a pariendo parilema: exin mutatis litteris, ut in multis, dici coepta palma. Ex altera parte parit capreolum. Is est coliculus viteus intortus, ut cincinnus. hi sunt enim vitis quibus teneat id quo serpit ad locum capiendum, a quo capiendo capreolus dictus. Omne pabulum, primum ocinum farraginem viciam, novissime faenum, secari. Ocinum dictum a graeco verbo, okeos quod valet cito, similiter quod ocimum in horto. Hoc amplius dictum ocinum, quod citat alvom bubus et ideo iis datur, ut purgentur. Id est ex fabali segete viride sectum, antequam genat siliquas. Farrago contra ex segete ubi sata admixta hordeum et vicia et legumina pabuli causa viride aut quod ferro caesa ferrago dicta, aut inde, quod primum in farracia segete seri coepta. Eo equi et iumenta cetera verno tempore purgantur ac saginantur. Vicia dicta a vinciendo, quod item capreolos habet, ut vitis, quibus, cum susum versus serpit, ad scapum lupini aliumve quem ut haereat, id solet vincere. Si prata inrigua habebis, simulac faenum sustuleris, inrigare. In poma, quae insita erunt, siccitatibus aquam addi cotidie vesperi. A quo, quod indigent potu, poma dicta esse possunt.

[31.1] “In the third period, between the rising of the Pleiades and the solstice, these operations should be carried out: — Digging or ploughing the young vines and then forking them, that is, breaking the ground so that there will be no clods. This is called *occare* because they crush (*occidunt*) the ground. The vines should be thinned (for that is better than pruning), but by an expert, and this should be done not in the orchard but in the vineyard. [2] Thinning consists in leaving the first and second, sometimes even the third of the strongest shoots with spring from the stock and picking off the rest, lest the stock be not strong enough to furnish sap to the shoots if all are left. For that reason, in the vine-nursery when the vine first comes out, it is the practice for the whole to

be cut back, so that it may come from the ground with a sturdier stock and have greater strength in sending out shoots. [3] For a slender stock, on account of weakness, is sterile and cannot put out the vine, which, when it is smaller, they call *flagellum*, while the larger from which the grapes spring they call *palma*. The first word by the change of one letter is derived from *flatus*, the blowing of the wind, so that they call it *flagellum* instead of *flabellum*. The second word seems at first to have been called *parilema*, from *parere*, to bear, because the shoot is sent out to bear grapes; [4] thence, by change of letters, as in many words, it got to be called *palma*. On the other side, it bears a *tendril*; this is a vine twig twisted like a curl. It is by means of these tendrils that the vine holds the support on which it creeps to grasp a place, from which grasping (*capere*) it is called *capreolus*. All fodder crops should be cut, first clover, mixed fodder, and vetch, and last hay. *Ocinum* is derived, as is the garden clover (*ocimum*), from the Greek word *ὀκέως*, which means ‘quickly.’ It is called *ocinum* for the further reason that it moves (*citat*) the bowels of cattle, and is fed to them on that account, as a purgative. It is cut green from the bean crop before it forms pods. [5] *Farrago*, on the other hand, is so called from a crop where a mixture of barley, vetch, and legumes has been sowed for green feed, either because it is cut with the steel (*ferrum*, *ferrago*) or for the reason that it was first sowed in a spelt (*far*) field. It is with this that horses and other animals are purged and fattened in the spring. Vetch is so called from *vincire*, to bind, because it also has tendrils as the vine has, with which, when it creeps up to cling to the stalk of the lupine or some other plant, it usually binds (*vincit*) it. If you have meadows to be irrigated, as soon as you have gathered the hay, irrigate them. During droughts water should be given every evening to the fruit trees that are grafted. It may be that they are called *poma* from the fact that they need drink (*potus*).

XXXII.

Quarto intervallo inter solstitium et caniculam plerique messem faciunt, quod frumentum dicunt quindecim diebus esse in vaginis, quindecim florere, quindecim exarescere, cum sit maturum. Arationes absolvi, quae eo fructuosiores fiunt, quo caldiore terra aratur. Si proscideris, offringi oportet, id est iterare, ut frangantur glabrae; prima enim aratione grandes glabrae ex terra scinduntur. Serendum viciam, lentem, cicerculam, ervilam ceteraque, quae alii legumina, alii, ut Gallicani quidam, legarica appellant, utraque dicta a legendo, quod ea non secantur, sed vellendo leguntur. Vineas veteres iterum occare, novellas etiam tertio, si sunt etiam tum glabrae.

[32.1] “In the fourth period, between the solstice and the Dog Star, most farmers harvest, because it is a saying that the grain is in the sheath for fifteen days, blooms for fifteen days, dries for fifteen days, and is then ripe. Ploughing should be completed, and it will be more valuable in proportion as it is done in warm ground; if you are ‘breaking up’ the ground it should be crushed, that

is, gone over a second time so that the clods may be broken; for in the first ploughing large clods are cut from the ground. [2] You should sow vetch, lentils, small peas, pulse, and other plants, which some call legumes, and others, like some Gallic farmers, call legarica, both words being derived from legere, because these are not reaped, but are gathered by pulling. Hoe old vines a second time, young ones even a third time, if there are clods still left.

XXXIII.

Quinto intervallo inter caniculam et aequinoctium autumnale oportet stramenta desecari et acervos constitui, arata offringi, frondem caedi, prata inrigua iterum secari.

[33.1] “In the fifth period, between the Dog Star and the autumnal equinox, the straw should be cut and stacks built, ploughed land harrowed, leaf-fodder gathered, and irrigated meadows mowed a second time.

XXXIV.

Sexto intervallo ab aequinoctio autumnali incipere scribunt oportere serere usque ad diem nonagensimum unum. Post brumam, nisi quae necessaria causa coegerit, non serere, quod tantum intersit, ut ante brumam sata quae septimo die, post brumam sata quadragesimo die vix existant. Neque ante aequinoctium incipi oportere putant, quod, si minus idoneae tempestates sint consecutae, putescere semina soleant. Fabam optime seri in vergiliarum occasu: uvas autem legere et vindemiam facere inter aequinoctium autumnale et vergiliarum occasum; dein vites putare incipere et propagare et serere poma. Haec aliquot regionibus, ubi maturius frigora fiunt asperiora, melius verno tempore.

[34.1] “In the sixth period, from the autumnal equinox, the authorities state that sowing should begin and continue up to the ninety-first day. After the winter solstice, unless necessity requires, there should be no sowing — a point of such importance that seeds which, when planted before the solstice, sprout in seven days, hardly sprout in forty if sowed after the solstice. And they hold that sowing should not begin before the equinox, because, if unfavourable seasons follow, the seeds usually rot. Beans are sowed to best advantage at the time of the setting of the Pleiades: [2] while the gathering of the grapes and the making of the vintage falls between the autumnal equinox and the setting of the Pleiades; then the pruning and layering of vines and the planting of fruit trees should begin. In some localities, where severe frosts come earlier, these operations are best carried on in spring.

XXXV.

Septimo intervallo inter vergiliarum occasum et brumam haec fieri oportere dicunt: Serere lilium et crocum. Quae iam egit radicem rosa, ea conciditur

radicitus in virgulas palmares et obruitur, haec eadem postea transfertur facta viviradix. Violaria in fundo facere non est utile, ideo quod necesse est terra adruenda pulvinos fieri, quos inrigationes et pluviae tempestates abluunt et agrum faciunt macriorem. A favonio usque ad arcturi exortum recte serpillum e seminario transferri, quod dictum ab eo, quod serpit. Fossas novas fodere, veteres tergere, vineas arbustumque putare, dum in XV diebus ante et post brumam, ut pleraque, ne facias. Nec non tum aliquid recte seritur, ut ulmi.

[35.1] “In the seventh period, between the setting of the Pleiades and the winter solstice, they say that these operations should be carried out: — Planting of lilies and crocus. A rose which has already formed a root is cut from the root up into twigs a palm-breadth long and planted; later on the same twig is transplanted when it has made a living root. It is not profitable to plant violet beds on a farm for the reason that beds must be formed by heaping up the soil, and irrigation and heavy rains wash these away and thus make the ground poorer. [2] From the beginning of the west wind to the rising of Arcturus, it is proper to transplant from the nursery wild thyme, which gets its name (serpillum) from the fact that it ‘creeps’ (serpit). Dig new ditches, clear old ones, prune vineyards and orchards, provided you do not do this, or in fact most things, during the fifteen days preceding and following the solstice. And yet some trees, such as the elm, are properly planted at that time.

XXXVI.

Octavo intervallo inter brumam et favonium haec fieri oportet. De segetibus, siqua est aqua, deduci; sin siccitates sunt et terra teneritudinem habet, sarire. Vineas arbustaque putare. Cum in agris opus fieri non potest, quae sub tecto possunt tunc conficienda antelucano tempore hiberno. Quae dixi scripta et proposita habere in villa oportet, maxime ut vilicus norit.

[36.1] “In the eighth period, between the solstice and the beginning of the west wind, these operations should be carried out: — Any water in the grain lands should be drained, but if there is a drought and the land is friable, harrow. Prune vineyards and orchards. When work cannot be carried out on the land, indoor tasks should be completed then in the early winter mornings. You should keep the rules I have laid down written and posted in the farmstead, in order that the overseer particularly may know them.

XXXVII.

Dies lunares quoque observandi, qui quodam modo bipertiti, quod a nova luna crescit ad plenam et inde rursus ad novam lunam decrescit, quoad veniat ad intermenstruum, quo die dicitur luna esse extrema et prima; a quo eum diem Athenis appellant enhn kai nean, triakada alii. Quaedam facienda in agris potius crescente luna quam senescente, quaedam contra quae metas, ut frumenta et caeduas silvas. Ego istaec, inquit Agrasius, non solum in ovibus

tondendis, sed in meo capillo a patre acceptum servo, ni crescente luna tondens calvos fiam. Agrius, Quem ad modum, inquit, luna quadripartita? Et quid ea divisio ad agros pollet? Tremelius, Numquam rure audisti, inquit, octavo Ianam lunam et crescentem et contra senescentem, et quae crescente luna fieri oporteret, [et] tamen quaedam melius fieri post octavo Ianam lunam quam ante? Et si quae senescente fieri conveniret, melius, quanto minus haberet ignis id astrum? Dixi de quadripartita forma in cultura agri.

Stolo, Est altera, inquit, temporum divisio coniuncta quodam modo cum sole et luna sexpartita, quod omnis fere fructus quinto denique gradu pervenit ad perfectum ac videt in villa dolium ac modium, unde sexto prodit ad usum. Primo praeparandum, secundo serendum, tertio nutricandum, quarto legendum, quinto condendum, sexto promendum. Ad alia in praeparando faciendi scrobes aut repastinandum aut sulcandum, ut si arbustum aut pomarium facere velis; ad alia arandum aut fodiendum, ut si segetes instituas; ad quaedam bipalio vertenda terra plus aut minus. Aliae enim radices angustius diffundunt, ut cupressi, aliae latius, ut platani, usque eo ut Theophrastus scribat Athenis in Lyceo, cum etiam nunc platanus novella esset, radices trium et triginta cubitorum egisse. Quaedam si bubus et aratro proscideris, et iterandum, antequam semen iacias. Item praeparatio si quae fit in pratis, id est ut defendantur a pastione, quod fere observant a piro florente; si inrigua sunt, ut tempestive inrigentur.

[37.1] “The lunar periods also must be taken into account; these are roughly twofold, as the moon waxes from the new to the full and then wanes again toward the new, until it reaches the intermenstruum, or time ‘between two months,’ on which day the moon is said to be ‘last and first’; hence, at Athens they call this day ἔντην καὶ νέαν, or ‘old and new,’ while others call it τριακάδα, or the ‘thirtieth.’ Some operations should be carried out on the land during the waxing rather than the waning of the moon, while there are certain crops which you should gather in the opposite phase, such as grain and firewood.” [2] “I learned this rule from my father,” said Agrasius, “and I keep it not only in shearing my sheep but in cutting my hair, for fear that if I have it done when the moon is waxing I may become bald.” “After what method is the moon divided into quarters,” asked Agrius, “and what influence has that division on farming?” [3] “Have you never heard in the country,” replied Tremelius, “the expressions ‘eight days before the waxing of the moon,’ and ‘eight days before the waning of the moon,’ and that of the things which should be done when the moon is waxing some are nevertheless better done after this ‘eight days before the waxing’ than before it; and that the things which should be done when she is waning are better done the less light that heavenly body has? I have discussed the fourfold division in agriculture.”

[4] “There is,” said Stolo, “a second, a sixfold-division of seasons of which may be said to bear a relation to the sun and moon, because almost every

product comes to perfection in five stages and reaches jar and basket in the farmstead, and from these is brought forth for use in the sixth. The first stage is the preparation, the second the planting, the third the cultivation, the fourth the harvesting, the fifth the storing, the sixth the marketing. In the matter of preparation: for some crops you must make trenches or dig thoroughly or draw furrows, as when you wish to make an arbustum or an orchard; for others you must plough or spade, as when you starting a grain field; [5] for some the earth must be turned more or less deeply with the trenching spade. For some trees, such as the cypress, spread their roots less, and others, such as the plane, more; so much, indeed, that Theophrastus mentions a plane tree in the Lyceum at Athens which, even when it was quite young, had thrown out its roots to a spread of thirty-three cubits. Certain land, when you have broken it with oxen and plough, must be worked a second time before you broadcast the seed. Any preparation that is made in the matter of meadows consists in closing them from grazing, a practice which is usually observed from the time of the blooming of the pear trees; and if they are irrigated, in turning in the water at the proper time.

XXXVIII.

Quae loca in agro stercoranda, videndum, et qui et quo genere potissimum facias: nam discrimina eius aliquot. Stercus optimum scribit esse Cassius volucrium praeter palustrium ac nantium. De hisce praestare columbinum, quod sit calidissimum ac fermentare possit terram. Id ut semen aspargi oportere in agro, non ut de pecore acervatim poni. Ego arbitror praestare ex aviariis turdorum ac merularum, quod non solum ad agrum utile, sed etiam ad cibum ita bubus ac subus, ut fiant pingues. Itaque qui aviaria conducunt, si cavet dominus stercus ut in fundo maneat, minoris conducunt, quam ii quibus id accedit. Cassius secundum columbinum scribit esse hominis, tertio caprinum et ovillum et asininum, minime bonum equinum, sed in segetes; in prata enim vel optimum, ut ceterarum veterinarum, quae hordeo pascuntur, quod multam facit herbam. Stercilinum secundum villam facere oportet, ut quam paucissimis operis egeratur. In eo, si in medio robusta aliqua materia sit depacta, negant serpentem nasci.

[38.1] “We must observe what parts of the land must be manured, how the manure is to be applied, and the best kind to use; for there are several varieties. Cassius states that the best manure is that of birds, except marsh- and sea-fowl; and that the dung of pigeons is the best of these, because it has the most heat and causes the ground to ferment. This should be broadcast on the land like seed, and not placed in piles like cattle dung. [2] My own opinion is that the best dung is from aviaries of thrushes and blackbirds, as it is not only good for the land, but is excellent food both for cattle and swine, to fatten them. Hence those who lease aviaries with the owner’s stipulation that the dung shall remain on the place pay less rent than those who have the use

of it. Cassius states that next to pigeon dung human excrement is the best, and in the third place goat, sheep, and ass dung; [3] that horse dung is least valuable, but good on grain land; for on meadows it is the most valuable of all, as is that of all draught animals which feed on barley, because it produces a quantity of grass. The farmer should make a dung-hill near the steading, so that the manure may be cleared out with the least labour. They say that if an oak stake is driven into the middle of it no serpent will breed there.

XXXIX.

Sationis autem gradus, secundus, hanc habet curam: naturam ad quod tempus cuiusque seminis apta sit ad serendum. Nam refert in agro ad quam partem caeli quisque locus spectet, sic ad quod tempus quaeque res facillime crescat. Nonne videmus alia florere verno tempore, alia aestivo, neque eadem autumnali, quae hiberno? Itaque alia seruntur atque inseruntur et metuntur ante aut post quam alia; et cum pleraque vere quam autumno inserantur, circiter solstitium inseri ficos nec non brumalibus diebus cerasos. Quare cum semina sint fere quattuor generum, quae natura dedit, quae transferuntur e terra in terram viva radice, quae ex arboribus dempta demittuntur in humum, quae inseruntur ex arboribus in arbores, de singulis rebus videndum, quae quoque tempore locoque facias.

[39.1] “The second step, that of planting, requires care as to the season of planting which is suited to the nature of each seed. For in a field it is important to note the exposure of every section, and also the season at which each plant grows best. Do we not observe that some blossom in spring, some in summer, and that the autumn growth is not the same as the winter? [2] Thus some plants are sown and grafted and harvested earlier or later than others; and while most are grafted in spring rather than in autumn, figs are grafted near the solstice, and cherries actually in mid-winter. [3] Now as seeds are, in general, of four kinds — those furnished by nature, those which are transplanted from one piece of ground to another as rooted slips, cuttings from trees planted in the ground, and grafts from tree to tree — you should observe what separate operation should be carried out at each season and in each locality.

XL.

Primum semen, quod est principium genendi, id duplex, unum quod latet nostrum sensum, alterum quod apertum. Latet, si sunt semina in aere, ut ait physicos Anaxagoras, et si aqua, quae influit in agrum, inferre solet, ut scribit Theophrastus. Illud quod apparet ad agricolas, id videndum diligenter. Quaedam enim ad genendum propensa usque adeo parva, ut sint obscura, ut cupressi. Non enim galbuli qui nascuntur, id est tamquam pilae parvae corticiae, id semen, sed in iis intus. Primigenia semina dedit natura, reliqua invenit experientia coloni. Prima quae sine colono, priusquam sata, nata;

secunda quae ex iis collecta neque, priusquam sata, nata. Prima semina videre oportet ne vetustate sint exsucta aut ne sint admixta aut ne propter similitudinem sint adulterina. Semen vetus tantum valet in quibusdam rebus, ut naturam commutet. Nam ex semine brassicae vetere sato nasci aiunt rapa et contra ex raporum brassicam. Secunda semina videre oportet ne, unde tollas, nimium cito aut tarde tollas. Tempus enim idoneum, quod scribit Theophrastus, vere et autumno et caniculae exortu, neque omnibus locis ac generibus idem. In sicco et macro loco et argilloso vernum tempus idoneum, quo minus habet umoris: in terra bona ac pingui autumno, quod vere multus umor, quam sationem quidam metiuntur fere diebus XXX. Tertium genus seminis, quod ex arbore per surculos defertur in terram, si in humum demittitur, in quibusdam est videndum ut eo tempore sit deplantatum, quo oportet (id fit tum, antequam gemmare aut florere quid incipit); et quae de arbore transferas ut ea deplantes potius quam defringas, quod plantae solum stabilius, quo latius aut radices facilius mittit. Ea celeriter, antequam sucus exarescat, in terram demittunt. In oleagineis seminibus videndum ut sit de tenero ramo ex utraque parte aequabiliter praecisum, quas alii clavolas, alii taleas appellant ac faciunt circiter pedales. Quartum genus seminis, quod transit ex arbore in aliam, videndum qua ex arbore in quam transferatur et quo tempore et quem ad modum obligetur. Non enim pirum recipit quercus, neque enim si malus pirum. Hoc secuntur multi, qui haruspices audiunt multum, a quibus proditum, in singulis arboribus quot genera insita sint, uno ictu tot fulmina fieri illud quod fulmen concepit. Si in pirum silvaticam inserueris pirum quamvis bonam, non fore tam iucundam, quam si in eam quae silvestris non sit. In quamcumque arborem inseras, si eiusdem generis est, dumtaxat ut sit utraque malus, ita inserere oportet referentem ad fructum, meliore genere ut sit surculus, quam est quo veniat arbor. Est altera species ex arbore in arborem inserendi nuper animadversa in arboribus propinquis. Ex arbore, qua vult habere surculum, in eam quam inserere vult ramulum traducit et in eius ramo praeciso ac diffisso implicat, eum locum qui contingit, ex utraque parte quod intro est falce extenuatum, ita ut ex una parti quod caelum visurum est corticem cum cortice exaequatum habeat. Eius ramuli, quem inseret, cacumen ut directum sit ad caelum curat. Postero anno, cum comprehendit, unde propagatum est, ab altera arbore praecidit.

[40.1] “In the first place, the seed, which is the origin of growth, is of two kinds, one being invisible, the other visible. There are invisible seed, if, as the naturalist Anaxagoras holds, they are in the air, and if the water which flows on the land carries them, as Theophrastus writes. The seed which can be seen should be carefully watched by the farmer; for some seed, such as that of the cypress, though capable of generating, is so small that it can hardly be seen; (for the pods which it bears, that look like little balls of bark, are not the seeds but contain them). [2] The original seeds were given by nature, while the later were discovered in the experiments of the farmer. The first are those which, without the aid of the farmer, grow without being sown; the second are those

which, derived from these, do not grow without being sown. In the case of the first, care should be taken to see that they are not dried out from age, and that they are clean and not mixed with seed of similar appearance. The age of the seed is of such importance in the case of some plants that it alters their nature; thus from the planting of old cabbage seeds it is said that rape grows, and on the other hand that cabbage grows from old rape seed. [3] In the case of the second class of seed, you should be careful not to transplant them too early or too late. The proper time is that given by Theophrastus — spring, autumn, and at the rising of the Dog Star — but the time is not the same for all localities and all species. In ground that is dry, thin, or clayey, spring is the proper season, because it is less humid; in good, rich land the autumn, because in spring it is very wet. Some authorities allow about thirty days for such planting. [4] In the third method, which consists in transferring shoots from a tree into the ground, if the shoot is buried in the earth, you must be careful, in the case of some, that the shoot be removed at the proper time — that is, before it shows any sign of budding or blossoming; and that what you transplant from the tree you tear from the stock rather than break off a limb, as the heel of a shoot is steadier, or the wider it is the more easily it puts out roots. They are thrust into the ground at once, before the sap dries out. In the case of olive cuttings, care must be taken that they be from a tender branch, sharpened evenly at both ends. Such cuttings, about a foot in length, are called by some *clavolae*, and by others *taleae*. [5] In the fourth method, which consists in running a shoot from one tree to another, the points to be observed are the nature of the tree, the season, and the method of fastening. You cannot, for instance, graft a pear on an oak, even though you can on an apple. This is a matter of importance to many people who pay considerable attention to the soothsayers; for these have a saying that when a tree has been grafted with several varieties, the one that attracts the lightning turns into as many bolts as there are varieties, though the stroke is a single one. No matter how good the pear shoot which you graft on a wild pear, the fruit will not be as well flavoured as if you graft it on a cultivated pear. [6] It is a general rule in grafting, if the shoot and the tree are of the same species, as, for instance, if both are of the apple family, that for the effect on the fruit the grafting should be of a such a nature that the shoot is of a better type than the tree on which it is grafted. There is a second method of grafting from tree to tree which has recently been developed, under conditions where the trees stand close to each other. From the tree from which you wish to take the shoot a small branch is run to the tree on which you wish to graft and is inserted in a branch of the latter which has been cut off and split; the part which fits into the branch having first been sharpened on both sides with the knife so that one side the part which will be exposed to the weather will have bark fitted accurately to bark. Care is taken to have the tip of the grafted shoot point straight up. The next year, after it has taken firm hold, it is cut off the parent stem.

Quo tempore quaeque transferas, haec in primis videnda, quae prius verno tempore inserebantur, nunc etiam solstitiali, ut ficus, quod densa materia non est et ideo sequitur caldorem. A quo fit ut in locis frigidis ficeta fieri non possint. Aqua recenti insito inimica: tenellum enim cito facit putre. Itaque caniculae signo commodissime existimatur ea inseri. Quae autem natura minus sunt mollia, vas aliquod supra alligant, unde stillet lente aqua, ne prius exarescat surculus, quam colescat. Cuius surculi corticem integrum servandum et eum sic exacuendum, ut non denudes medullam. Ne extrinsecus imbres noceant aut nimius calor, argilla oblinendum ac libro obligandum. Itaque vitem triduo antequam inserant desecant, ut qui in ea nimius estumor defluat, antequam inseratur; aut in quam inserunt, in ea paulo infra, quam insitum est, incidunt, quaumor adventicius effluere possit. Contra in fico et malo punica, et siquae etiam horum natura aridiora, continuo. In aliis translationibus videndum ut quod transferat cacumen habeat gemmam, ut in ficis.

De his primis quattuor generibus seminum quaedam quod tardiora, surculis potius utendum, ut in ficetis faciunt. Fici enim semen naturale intus in ea fico, quam edimus, quae sunt minuta grana; e quibus parvis quod enasci coliculi vix queunt — omnia enim minuta et arida ad crescendum tarda, ea quae laxiora, et fecundiora, ut femina quam mas et pro portione in virgultis item; itaque ficus, malus punica et vitis propter femineam mollitiam ad crescendum prona, contra palma et cupressus et olea in crescendo tarda: in hoc enim umidiora quam aridiora — quare ex terra potius in seminariis surculos de ficeto quam grana de fico expedit obruere, praeter si aliter nequeas, ut siquando quis trans mare semina mittere aut inde petere vult. Tum enim resticulam per ficos, quas edimus, maturas perserunt et eas, cum inaruerunt, complicant ac quo volunt mittunt, ubi obrutae in seminario pariant. Sic genera ficorum, Chiae ac Chalcidicae et Lydiae et Africanae, item cetera transmarina in Italiam perlata. Simili de causa, oleae semen cum sit nucleus, quod ex eo tardius enascebatur colis quam ex aliis, ideo potius in seminariis taleas, quas dixi, serimus.

[41.1] “As to the proper season for grafting, this must be especially observed: that some plants which formerly were grafted in spring are now grafted in mid-summer also, such as the fig, which, as the wood is not hard, requires warm weather; it is for this reason that fig groves cannot be planted in cold localities. Moisture is harmful to a fresh graft, for it causes the tender shoot to decay quickly, [2] and hence it is the common view that this tree is best grafted in the dog days. In the case of plants which are not so soft, however, a vessel is fastened above the graft in such a way that water may drip slowly to keep the shoot from drying out before it unites with the tree. The bark of the shoot must be kept uninjured, and the shoot itself be sharpened in such a way as not to bare the pith. To prevent moisture or excessive heat from injuring it on the surface its be smeared with clay and tied up with bark. [3] For this reason the

vine is cut off three days before grafting, so that any excessive moisture in it may run out before it is grafted; or else a cut is made in the branch on which the graft is made a little lower than the graft, so as to allow casual water to run off. On the other hand, figs, pomegranates, and plants of a drier nature are grafted at once. In other graftings, such as of figs, care must be taken that the shoot contains a bud.

[4] “Of these four forms of propagation it is better to use quicksets in the case of some slow-growing plants, as is the practice in fig groves; for the natural seed of the fig is on the inside of the fruit which we eat, in the form of very small grains. As the seedling can scarcely spring from these small grains — for all things which are small and dry grow slowly, while those which are of looser texture are also of more rapid growth, as, for instance, the female grows more rapidly than the male, a rule which holds good also in plants to some extent, the fig, the pomegranate, and the vine being, on account of their feminine softness, of rapid growth, while, on the other hand, the palm, the cypress, and the olive are of slow growth; [5] for in this respect the humid [are quicker] than the dry — it is therefore better to plant in the nursery shoots from the fig tree than grains from the fruit; unless this is impracticable, as when you wish to ship seeds overseas or import them thence. In this case we pass a string through the figs when they are ripe for eating, and after they have dried they are tied in bundles and may be sent where we will; and there they are planted in a nursery and reproduce. [6] It was in this manner that the Chian, Chalcidian, Lydian, African, and other varieties of over-sea figs were imported into Italy. For a similar reason, the seed of the olive being a nut, we prefer to plant in our nurseries the cuttings which I have described, as the stem was found to spring more slowly from the olive nut than from others.

XLII.

In primis observet ne in terram nimium aridam aut variam, sed temperatam, semen demittas. In iugerum unum, si est natura temperata terra, scribunt opus esse medicae sesquimodum. Id seritur ita, ut semen iaciatur, quem ad modum cum pabulum et frumentum seritur.

[42.1] “Be especially careful not to plant in ground that is very dry or very wet, but rather in moderately moist ground. Authorities state that the proper amount of alfalfa is a modius and a half to the iugerum, if the ground is by nature moderately moist; the method of sowing is to broadcast the seed, as is done in sowing forage crops and grain.

XLIII.

Cytisum seritur in terra bene subacta tamquam semen brassicae. Inde differtur et in sesquipedem ponitur, aut etiam de cytiso duriore virgulae deplantantur, et ita pangitur in serendo.

[43.1] “Snail-clover is sowed on land that has been thoroughly worked, like cabbage seed; then it is transplanted at intervals of a foot and a half, or, when the plant is more mature, shoots are detached, and it is set out in planting as above.

XLIV.

Seruntur fabae modii IIII in iugero, tritici V, hordei VI, farris X, sed non nullis locis paulo amplius aut minus. Si enim locus crassus, plus; si macer, minus. Quare observabis, quantum in ea regione consuetudo erit serendi, ut tantum facias, quod tantum valet regio ac genus terrae, ut ex eodem semine aliubi cum decimo redeat, aliubi cum quinto decimo, ut in Etruria locis aliquot. In Italia in Subaritano dicunt etiam cum centesimo redire solitum, in Syria ad Gadara et in Africa ad Byzacium item ex modio nasci centum. Illud quoque multum interest, in rudi terra, an in ea seras, quae quotannis obsita sit, quae vocatur restibilis, an in vervacto quae interdum requierit. Cui Agrius, In Olynthia quotannis restibilia esse dicunt, sed ita ut tertio quoque anno uberiores ferant fructos. Licinius, Agrum alternis annis relinqui oportet paulo levioribus sationibus, id est quae minus sugunt terram.

Dicetur, inquit Agrius, de tertio gradu, de nutritionibus atque alimoniis eorum. Ille, Quae nata sunt, inquit, in fundo alescunt, adulta concipiunt, praegnata, cum sunt matura, pariunt poma aut spicam, sic alia. A quo profectum, redit semen. Itaque si florem acerbumve pirum aliudve quid decerpseris, in eodem loco eodem anno nihil renascitur, quod praegnationis idem bis habere non potest. Ut enim mulieres habent ad partum dies certos, sic arbores ac fruges.

[44.1] “Beans are sowed 4 modii to the iugerum, wheat 5, barley 6, spelt 10, the amount being a little more or less in some localities; more being sowed on rich ground and less on thin. You should therefore note the amount that is usually sowed in the district and follow this practice; for the locality and the type of soil is so important that the same seed in one district yields tenfold and in another fifteen-fold — as at some places in Etruria. [2] Around Sybaris in Italy the normal yield is said to be even a hundred to one, and a like yield is reported near Gadara in Syria, and for the district of Byzacium in Africa. It also makes a great difference whether the planting is on virgin soil or on what is called restibilis — land cultivated every year — or on vervactum, which is allowed sometimes to lie fallow between crops.” [3] “In Olynthia,” remarked Agrius, “they say that the land is cropped every year, but in such a way that a richer crop is produced every other year.” “Land ought to be left every other year with somewhat lighter crops,” rejoined Licinius; “I mean by that crops which are less exhausting to the land.”

“Tell us now,” said Agrius, “of the third step, the nurture and feeding of the plant.” [4] “All plants,” resumed Stolo, “grow in the soil, and when mature

conceive, and when the time of gestation is complete bear fruit or ear, or the like; and the seed returns whence it came. Thus, if you pluck the blossom or an unripe pear, or the like, no second one will grown on the same spot in the same year, as the same plant cannot have two periods of gestation. For trees and plants, just as women, have a definite period from conception to birth.

XLV.

Primum plerumque e terra exit hordeum diebus VII, nec multo post triticum; legumina fere quadriduo aut quinque diebus, praeterquam faba: ea enim serius aliquanto prodit. Item milium et sesima et cetera similiter aequis fere diebus, praeterquam siquid regio aut tempestas viti attulit, quo minus ita fiat. Quae in seminario nata, si loca erunt frigidiora, quae molli natura sunt, per brumalia tempora tegere oportet fronde aut stramentis. Si erunt imbres secuti, videndum necubi aqua consistat; venenum enim gelum radicibus tenellis. Sub terra et supra virgulta non eodem tempore aequae crescunt; nam radices autumnio aut hieme magis sub terra quam supra alescent, quod tectae terrae tepore propagantur, supra terram aere frigidior coguntur. Itaque ita esse docent silvestria, ad quae sator non accessit. Nam prius radices, quam ex iis quod solet nasci, crescunt. Neque radices longius procedunt, nisi quo tepor venit solis. Duplex causa radicum, quod et materiem aliam quam aliam longius proicit natura, et quod alia terra alia facilius viam dat.

[45.1] “Barley usually appears in seven days, wheat not much later; legumes usually in four or five days, except the bean, which is somewhat slower in appearing. Millet also, and sesame, and similar plants appear in about the same number of days, except in cases where the locality or the weather prevents this from occurring. [2] Seedlings in the nursery should be covered with leaves or straw during the winter if the locality is at all cold, as they are tender; and if rains follow, water must not be allowed to stand anywhere, for frost is baneful to the tender rootlets. [3] Plants do not grow at the same rate below and above ground; thus roots grow faster below than does the part above ground in autumn and in winter because, being covered, they are nourished by the heat of the earth, while the part above ground is checked by the colder air. Wild plants which have not been touched by the planter show that this is true; for roots grow before the plant which comes from them, but they go no deeper than the point to which the sun’s warmth reaches. The growth of roots is determined by two factors: that nature thrusts one kind of wood to a greater distance than another; and that one kind of soil yields more readily than another.

XLVI.

Propter cuius modi res admiranda discrimina sunt naturae aliquot, ex quibusdam foliis propter eorum versuram, quod sit anni tempus, ut dici possit, ut olea et populus alba et salix. Horum enim folia cum converterunt se,

solstitium dicitur fuisse. Nec minus admirandum quod fit in floribus, quos vocant heliotropia ab eo, quod ad solis ortum mane spectant et eius iter ita secuntur ad occasum, ut ad eum semper spectent.

[46.1] “As a result of factors of this kind there are several remarkable differences of character; so that, for instance, the season may be told from the leaves of such trees as the olive, the silver poplar, and the willow, by the direction in which they lie; thus when the leaves of these trees turn over it is said that the summer solstice has passed. No less remarkable is the behaviour of the flowers which are called ‘heliotropes’ from the fact that they face the rising sun in the morning and follow his course until the setting, facing him the whole time.

XLVII.

In seminario quae surculis consita et eorum molliora erunt natura cacumina, ut olea ac ficus, ea summa integenda binis tabellis dextra et sinistra deligatis herbaeque eligendae. Eae dum tenerae sunt, vellendae. Post enim aridae factae rixantur ac celerius rumpuntur, quam secuntur. Contra herba in pratis ad spem faenisiciae nata non modo non evellenda in nutritu, sed etiam non calcanda. Quo et pecus ab prato ablegandum et omne iumentum, etiam hominem. Solum enim hominis exitium herbae et semitae fundamentum.

[47.1] “Plants such as the olive and fig, such, reared in the nursery from shoots and naturally somewhat delicate on top, should be protected at the top by two boards tied right and left; and the weeds should be cleared. These should be pulled while they are young; for after they become dry they resist more strongly, and break off more readily than they yield. On the other hand, growth that springs up on a meadow for haying must not only not be plucked while it is maturing, but also must not be trampled. For this reason flocks, and every sort of animal, including even man, must be kept off a meadow; for the foot of man is death to grass and marks the beginning of a path.

XLVIII.

In segetibus autem frumentum quo culmus extulit, spicam. Ea quae mutilata non est, in hordeo et tritico, tria habet continentia, granum, glumam, aristam et etiam, primitus spica cum oritur, vaginam. Granum dictum quod est intimum soldum; gluma qui est folliculus eius; arista quae ut acus tenuis longa eminet e gluma, proinde ut grani apex sit gluma et arista. Arista et granum omnibus fere notum, gluma paucis. Itaque id apud Ennium solum scriptum scio esse in Euhemeri libris versis. Videtur vocabulum etymum habere a glubendo, quod eo folliculo deglubitur granum. Itaque eodem vocabulo appellant fici eius, quam edimus, folliculum. Arista dicta, quod arescit prima. Granum a gerendo; id enim ut gerat spica, seritur frumentum, non ut glumam aut aristam gerat, ut vitis seritur, non ut pampinum ferat, sed ut uvam. Spica

autem, quam rustici, ut acceperunt antiquitus, vocant specam, a spe videtur nominata; eam enim quod sperant fore, serunt. Spica mutila dicitur, quae non habet aristam; ea enim quasi cornua sunt spicarum. Quae primitus cum oriuntur neque plane apparent, qua sub latent herba, ea vocatur vagina, ut in qua latet conditum gladium. Illud autem summa in spica iam matura, quod est minus quam granum, vocatur frit; quod in infima spica ad culmum stramenti summum item minus quam granum est, appellatur urru.

[48.1] “Now, in the case of grain crops, that by which the stalk puts forth the grain is the head. If is this “hornless,” as in barley and wheat, it has three components: the grain, the husk, and the beard — and the sheath, also, when the ear first appears. The hard inner part is called the grain; the husk is its envelope; and the beard is the part which rises from the husk like a long, slender needle, just as if the husk and bead formed a peaked cap for the grain.

[2] ‘Beard’ and ‘grain’ are familiar words to most people, but ‘husk’ (gluma) to few; thus the only place where it occurs, to my knowledge, is in Ennius, in his translation of Euhemerus. The word (gluma) seems to be derived from glubere, ‘strip,’ because the grain is stripped (deglubitur) from this envelope; so the same word is used for the envelope of the edible fruit of the fig tree. The beard is called arista from the fact that it is the first part to dry (arescere). The grain is so called from gerere; for the seed is planted that the ear may ‘bear’ (gerat) the grain, not the husk of the beard; just as the vine is planted not to bear leaves but grapes. The ear, however, which the peasants, in their old-fashioned way, call specā, seems to have got its name from spes; for it is because they hope (sperant) to have this grow that they plant. [3] An ear which has no beard is said to be ‘hornless,’ as the beard may be said to be the ‘horns’ of the ear. When these are just forming and are not yet quite visible, the green envelope under which they are hidden is called the sheath, being like the sheath in which a sword is encased. The part at the top of the full-grown ear, which is smaller than the grain, is called frit; while the part, also smaller than the grain, at the bottom of the ear where it joins the top of the stalk is called urru.”

XLIX.

Cum conticuisset nec interrogaretur, de nutritu credens nihil desiderari, Dicam, inquit, de fructibus maturis capiendis. Primum de pratis summissis herba, cum crescere desiit et aestu arescit, subsecari falcibus debet et, quoad perarescat, furcillis versari; cum peraruit, de his manipulos fieri ac vehi ad villam; tum de pratis stipulam rastellis eradi atque addere faenisiciae cumulum. Quo facto sicilienda prata, id est falcibus consecanda quae faenisices praeterierunt ac quasi herba tuberosum reliquerunt campum. A qua sectione arbitror dictum sicilire pratum.

[49.1] Stolo paused at this point, and, judging from the fact that no questions

were asked that no further discussion of nutrition was desired, he continued: "I shall discuss next the subject of harvesting the ripe crops. First the grass on the hay-meadows should be cut close with the sickle when it ceases to grow and begins to dry out with the heat, and turned with the fork while it is drying out; when it is quite dry it should be made into bundles and hauled to the barn. Then the loose hay from the meadows should be raked up and added to the hay-pile. [2] After doing this you should 'sickle' the meadows — that is, cut with the sickle what the mowers have passed over, leaving the field humped, as it were, with tufts of grass. I suppose the verb *sicilire*, used with meadow as object, is derived from this cutting (sectio).

L.

*Messis proprio nomine dicitur in iis quae metimur, maxime in frumento, et ab eo esse vocabulo declinata. Frumenti tria genera sunt messionis, unum, ut in Umbria, ubi falce secundum terram succidunt stramentum et manipulum, ut quemque subsicuerunt, ponunt in terra. Ubi eos fecerunt multos, iterum eos percensent ac de singulis secant inter spicas et stramentum. Spicas coiciunt in corbem atque in aream mittunt, stramenta relinunt in segete, unde tollantur in acervum. Altero modo metunt, ut in Piceno, ubi ligneum habent incurvum bacillum, in quo sit extremo serrula ferrea. Haec cum comprehendit fascem spicarum, desecat et stramenta stantia in segeti relinquit, ut postea subsecantur. Tertio modo metitur, ut sub urbe Roma et locis plerisque, ut stramentum medium subsicent, quod manu sinistra summum prendunt; a quo medio messem dictam puto. Infra manum stramentum cum terra haeret, postea subsecatur; contra quod cum spica stramentum haeret, corbis in aream deferitur. Ibi discedit in aperto loco palam: a quo potest nominata esse palea. Alii stramentum ab stando, ut *st[r]amen*, dictum putant; alii ab stratu, quod id substernatur pecori. Cum est matura seges, metendum, cum in ea [in] iugerum fere una opera propemodum in facili agro satis esse dicatur. Messas spicas corbis in aream deferre debent.*

[50.1] "The word *messis* is properly employed of the crops which we 'measure' (*metimur*), especially of grain; and this, I suggest, is the derivation of the word. There are three methods of harvesting grain: the first, employed in Umbria, in which the stalk is cut close to the ground with the hook, and each bundle, as it is cut, is laid on the ground. When a number of bundles are formed, they go over them again, and cut the ears from each close to the stalk. The ears are cast into the basket and carried to the threshing-floor, while the straw is left in the field and afterwards stacked. [2] In the second method, employed in Picenum, they use a curved handle of wood with a small iron saw attached to the end; when this catches a bundle of ears it cuts them off and leaves the straw standing in the field to be cut later. In the third method, employed near Rome and in numerous other places, seizing the top with the left hand they cut the straw in the middle; and I suggest that the word *messis*

is derived from this middle (medium) which they cut. The part of the stalk below the hand remains attached to the ground, and is cut later; [3] while the part which is attached to the ear is carried to the threshing-floor in baskets. The name for straw, *palea*, may be derived from the fact that there, in an uncovered place, it is detached ‘openly’ (*palam*); some derive the other word, *stramentum*, from *stare*, as they do also the word *stamen*, and others from *stratus*, because it is ‘spread’ (*substernitur*) under cattle. The grain should be cut when it is ripe; and on easily worked land it is held that the reaping of one iugerum is approximately a day’s work for one man — this should include the carrying of the reaped ears to the threshing-floor in baskets.

LI.

Aream esse oportet in agro sublimiori loco, quam perflare possit ventus; hanc esse modicam pro magnitudine segetis, potissimum rutundam et mediam paulo extumidam, ut, si pluerit, non consistat aqua et quam brevissimo itinere extra aream defluere possit; omne porro brevissimum in rutundo e medio ad extremum. Solida terra pavita, maxime si est argilla, ne, aestu peminosa si sit, in rimis eius grana oblitescant et recipiant aquam et ostia aperiant muribus ac formicis. Itaque amurca solent perfundere, ea enim herbarum et formicarum et talparum venenum. Quidam aream ut habeant soldam, muniunt lapide aut etiam faciunt pavimentum. Non nulli etiam tegunt areas, ut in Bagiennis, quod ibi saepe id temporis anni oriuntur nimbi. Ubi ea resecta et loca calda, prope aream faciundum umbracula, quo succedant homines in aestu tempore meridiano.

[51.1] “The threshing-floor should be on the place, in a somewhat elevated spot, so that the wind can sweep over it; the size should be determined by the size of the harvest. It should preferably be round, with a slight elevation at the centre, so that, if it rains, water will not stand but be able to run off the floor in the shortest line — and of course in a circle the shortest line is from the centre to the circumference. It should be built of solid dirt, well packed, and especially if it is of clay, so that it may not crack in the heat and allow the grain to hide, or take in water and open the door to mice and ants. For this reason it is customary to coat it with *amurca*, which is poison to weeds, ants, and moles. [2] Some farmers build up the floor with stone to make it solid, or even pave it. Others, such as the *Bagienni*, go so far as to build a shelter over the floors, because in that country rain-storms frequently occur at threshing time. When the floor is without a roof and the climate is hot, a shelter should be built hard by, to which the hands may go at midday in hot weather.

LII.

Quae seges grandissima atque optima fuerit, seorsum in aream secerni oportet spicas, ut semen optimum habeat; e spicis in area excuti grana. Quod fit apud alios iumentis iunctis ac tribulo. Id fit e tabula lapidibus aut ferro asperata,

quae cum imposito auriga aut pondere grandi trahitur iumentis iunctis, discutit e spica grana; aut ex axibus dentatis cum orbiculis, quod vocant plostellum poenicum; in eo quis sedeat atque agitet quae trahant iumenta, ut in Hispania citeriore et aliis locis faciunt. Apud alios exteritur grege iumentorum inacto et ibi agitato perticis, quod ungulis e spica exteruntur grana. Iis tritis oportet e terra subiectari vallis aut ventilabris, cum ventus spirat lenis. Ita fit ut quod levissimum est in eo atque appellatur acus ac palea evannatur foras extra aream ac frumentum, quod est ponderosum, purum veniat ad corbem.

[52.1] “On the threshing-floor the largest and best ears should be placed apart, to furnish the best seed, and the grain should be threshed on the floor. This is done in some districts by means of a yoke of steers and a sledge. The latter is constructed either of a board made rough with stones or iron, which separates the grain from the ear when it is dragged by a yoke of steers with the driver or a heavy weight on it; or of a toothed axle running on low wheels, called a Punic cart, the driver sitting on it and driving the steers which drag it — a contrivance in use in Hither Spain and other places. [2] Among other peoples the threshing is done by turning in cattle and driving them around with goads, the grain being separated from the beards by their hoofs. After the threshing the grain should be tossed from the ground when the wind is blowing gently, with winnowing fans or forks. The result is that the lightest part of it, called acus and palea, is fanned outside the floor, while the grain, being heavy, comes clean to the basket.

LIII.

Messi facta spicilegium venire oportet aut domi legere stipulam aut, si sunt spicae rarae et operae carae, compasci. Summa enim spectanda, ne in ea re sumptus fructum superet.

[53.1] “When the harvest is over the gleanings should be let, or the loose stalks gathered with your own force, or, if the ears left are few and the cost of labour high, it should be pastured. For the thing to be kept in view in this matter is that the expense shall not exceed the profit.

LIV.

In vinetis uva cum erit matura, vindemiam ita fieri oportet, ut videas, a quo genere uvarum et a quo loco vineti incipias legere. Nam et praecox et miscella, quam vocant nigram, multo ante coquitur, quo prior legenda, et quae pars arbusti ac vineae magis aprica, prius debet descendere de vite. In vindemia diligentis uva non solum legitur sed etiam eligitur; legitur ad bibendum, eligitur ad edendum. Itaque lecta defertur in forum vinarium, unde in dolium inane veniat; electa in secretam corbulam, unde in ollulas addatur et in dolia plena vinaciorum contrudatur, alia quae in piscinam in amphoram picatam descendat, alia quae in aream in carnarium escendat. Quae calcatae

uvae erunt, earum scopi cum folliculis subiciendi sub prelum, ut, siquid reliqui habeant musti, exprimatur in eundem lacum. Cum desiit sub prelo fluere, quidam circumcidunt extrema et rursus premunt et, rursus cum expressum, circumciscium appellant ac seorsum quod expressum est servant, quod resipit ferrum. Expressi acinorum folliculi in dolia coiciuntur, eoque aqua additur; ea vocatur lora, quod lota acina, ac pro vino operariis datur hieme.

[54.1] “As to vineyards, the vintage should begin when the grapes are ripe; and you must choose the variety of grapes and the part of the vineyard with which to begin. For the early grapes, and the hybrids, the so-called black, ripen much earlier and so must be gathered sooner; and the part of the plantation and vineyard which is sunnier should have its vines stripped first. [2] At the vintage the careful farmer not only gathers but selects his grapes; he gathers for drinking and selects for eating. So those gathered are carried to the wine-yard, thence to go into the empty jar; those selected are carried to a separate basket, to be placed thence in small pots and thrust into jars filled with wine dregs, while others are plunged into the pond in a jar sealed with pitch, and still others go up to their place in the larder. When the grapes have been trodden, the stalks and skins should be placed under the press, so that whatever must remains in them may be pressed out into the same vat. [3] When the flow ceases under the press, some people trim around the edges of the mass and press again; this second pressing is called circumsicium, and the juice is kept separate because it tastes of the knife. The pressed grape-skins are turned into jars and water is added; this liquid is called lora, from the fact that the skins are washed (lota), and it is issued to the labourers in winter instead of wine.

LV.

De oliveto oleam, quam manu tangere possis e terra ac scalis, legere oportet potius quam quater, quod ea quae vapulavit macescit nec dat tantum olei. Quae manu stricta, melior ea quae digitis nudis, quam illa quae cum digitabulis, durities enim eorum quod non solum stringit bacam, sed etiam ramos glubit ac relinquit ad gelicidium resectos. Quae manu tangi non poterunt, ita quati debent, ut harundine potius quam pertica feriantur; gravior enim plaga medicum quaerit. Qui quatiet, ne adversam caedat; saepe enim ita percussa olea secum defert de ramulo plantam, quo facto fructum amittunt posterius anni. Nec haec non minima causa, quod oliveta dicant alternis annis non ferre fructus aut non aequae magnos. Olea ut uva per idem bivium redit in villam, alia ad cibum, alia ut eliquescat ac non solum corpus intus unguat sed etiam extrinsecus. Itaque dominum et balneas et gymnasium sequitur. Haec, de qua fit oleum, congeri solet acervatim in dies singulos in tabulata, ut ibi mediocriter fracescat ac primus quisque acervos demittatur per serias ac vasa olearia ad trapetas, quae res molae oleariae ex duro et aspero lapide. Olea lecta si nimium diu fuit in acervis, calore fracescit et oleum foetidum fit.

Itaque si nequeas mature conficere, in acervis iactando ventilare oportet. Ex olea fructus duplex: oleum, quod omnibus notum, et amurca, cuius utilitatem quod ignorant plerique, licet videre e torculis oleariis fluere in agros ac non solum denigrare terram, sed multitudine facere sterilem; cum is umor modicus cum ad multas res tum ad agri culturam pertineat vehementer, quod circum arborum radices infundi solet, maxime ad oleam, et ubicumque in agro herba nocet.

[55.1] “With regard to the olive harvest: the olives which can be reached from the ground or by ladders should be picked rather than shaken down, because the fruit which has been bruised dries out and does not yield so much oil. Those picked with bare fingers are better than those picked with gloves, as the hard gloves not only bruise the berry [2] but also tear the bark from the branches and leave them exposed to the frost. Those which cannot be reached with the hand should be beaten down; but a reed should be used rather than a pole, as the heavier blow renders necessary the work of the tree-doctor. The one who is beating should not strike the olive directly; [3] for an olive struck in this way often tears away the shoot with it, and the fruit of the next year is lost. This is not the least reason for the saying that the olive fails to bear a crop every other year, or does not bear so full a crop. [4] The olive reaches the steading by the same two roads as the grape, one portion for food, and one to gush forth and anoint the body not only within but also without, thus following the master into the bath and into the gymnasium. [5] The portion from which oil is made is usually heaped on a flooring in piles as it comes in from day to day, so that it may mellow a little; and the piles pass in the same order through the jars and the olive vessels to the trapeta, which is an olive-mill fitted with hard stones roughened on the surface. [6] If the olives, after being picked, lie too long in the piles, they spoil from the heat and the oil becomes rancid; hence, if you cannot work them up promptly they should be aired by moving them about in the piles. [7] The olive yields two products: oil, well known to all, and amurca. As most people are ignorant of the value of the latter, you may see it flowing out from the olive presses on to the fields, and not only blackening the ground but rendering it barren when there is a large quantity of it; whereas, in moderate quantities, this fluid is not only extremely valuable for many purposes, but is especially valuable in agriculture, as it is usually poured around the roots of trees, chiefly olive trees, and where noxious weeds grow in the fields.”

LVI.

Agrius, Iamdudum, inquit, in villa sedens expecto cum clavi te, Stolo, dum fructus in villam referas. Ille, Em quin adsum, venio, inquit, ad limen, fores aperi. Primum faenisiciae conduntur melius sub tecto quam in acervis, quod ita fit iucundius pabulum. Ex eo intellegitur, quod pecus utroque posito libentius est.

[56.1] “I have been sitting in the steading for a long time,” exclaimed Agrius, “waiting, key in hand, Stolo, for you to bring the crops into the barn.” “Well,” replied Stolo, “here I am. I am coming up to the threshold; open the doors. First, it is better to stow the hay crop under cover than in stacks, as by this method it makes better fodder — as is proved by the fact that when both kinds are offered them, cattle prefer the former.

LVII.

Triticum condi oportet in granaria sublimia, quae perflentur vento ab exortu ac septemtrionum regione, ad quae nulla aura umida ex propinquis locis adspiret. Parietes et solum opere tectorio marmorato loricandi; si minus, ex argilla mixta acere e frumento et amurca, quod murem et vermem non patitur esse et grana facit solidiora ac firmiora. Quidam ipsum triticum conspargunt, cum addant in circiter mille modium quadrantal amurcae. Item alius aliut adfriat aut aspargit, ut Chalcidicam aut Caricam cretam aut absinthium, item huius generis alia. Quidam granaria habent sub terris speluncas, quas vocant sirus, ut in Cappadocia ac Thracia; alii, ut in agro Carthaginiensi et Oscensi in Hispania citeriore, puteos. Horum solum paleis substernunt et curant ne umor aut aer tangere possit, nisi cum promitur ad usum; quo enim spiritus non pervenit, ibi non oritur curculio. Sic conditum triticum manet vel annos L, milium vero plus annos C. Supra terram granaria in agro quidam sublimia faciunt, ut in Hispania citeriore et in Apulia quidam, quae non solum a lateribus per fenestras, sed etiam subtus a solo ventus refrigerare possit. Faba et legumina in oleariis vasis oblita cinere perdiu incolumia servantur.

[57.1] “Wheat should be stored in granaries, above ground, open to the draught on the east and north, and not exposed to damp air rising in the vicinity. The walls and floor are to be coated with marble cement, [2] or at least with clay mixed with grain-chaff and amurca, as this both keeps out mice and worms and makes the grain more solid and firm. Some farmers sprinkle the wheat, too, with amurca, using a quadrantal to about a thousand modii. Different farmers use different powders or sprays, such as Chalcidian or Carian chalk, or wormwood, and other things of this kind. Some use underground caves as granaries, the so-called sirus, such as occur in Cappadocia and Thrace; and still others use wells, as in the Carthaginian and Oscensian districts in Hither Spain. They cover the bottom of these with straw, and are careful not to let moisture or air touch them, except when the grain is removed for use; for the weevil does not breed where air does not reach. Wheat stored in this way keeps as long as fifty years, and millet more than a hundred. [3] Some people, as in Hither Spain and in Apulia, build granaries in the field, above ground, so constructed that the wind can cool them not only from the sides, through windows, but also beneath from the ground. Beans and legumes are kept fresh for a very long time in olive jars sealed with ashes.

Cato ait uvam Aminneam minusculam et maiorem et Apiciam in ollis commodissime condi; eadem in sapa et musto recte; quas suspendas opportunissimas esse duracinas et Aminneas.

[58.1] “Cato says that smaller and larger Aminnian grape, and the Apician, are best stored in jars, and that the same grapes keep well also in boiled or plain must; and that the best ones for drying are the hard grapes and the Aminnian.

LIX.

De pomis conditiva, mala struthea, cotonea, Scantiana, Scaudiana, orbiculata et quae antea mustea vocabant, nunc melimela appellant, haec omnia in loco arido et frigido supra paleas posita servari recte putant. Et ideo oporothecas qui faciunt, ad aquilonem ut fenestras habeant atque ut eae perflentur curant, neque tamen sine foriculis, ne, cum umorem amiserint, pertinaci vento vieta fiant; ideoque in iis camaras marmorato et parietes pavimentaue faciunt, quo frigidius sit. In quo etiam quidam triclinium sternere solent cenandi causa. Etenim in quibus luxuria concesserit ut in pinacotheca faciant, quod spectaculum datur ab arte, cur non quod natura datum utantur in venustate disposita pomorum? Praesertim cum id non sit faciendum, quod quidam fecerunt, ut Romae coempta poma rus intulerint in oporothecen instruendam convivi causa. In oporotheca mala manere putant satis commode alii in tabulis in opere marmorato, alii substrata palea vel etiam floccis; mala punica demissis suis surculis in dolio harenae, mala cotonea struthea in pensilibus iunctis; contra in sapa condita manere pira Aniciana sementiva; sorba quidam dissecta et in sole macerata, ut pira; et sorba per se, ubicumque sint posita in arido, facile durare: servare rapa consecata in sinape, nuces iugulandis in harena. Punica mala et in harena iam decerpta ac matura et etiam immatura, cum haereant in sua virga et demiseris in ollam sine fundo, eaque si coieceris in terram et obleris circum ramum, ne extrinsecus spiritus adflet, ea non modo integra eximi, sed etiam maiora, quam in arbore umquam pependissent.

[59.1] “The varieties of apples for preserving are the smaller and larger quinces, the Scantian, the Scaudian, the small round, and those formerly called must-apples, but now called honey-apples. It is thought that all these keep well in a dry and cool place, laid on straw. For this reason those who build fruit-houses are careful to let them have windows facing the north and open to the wind; but they have shutters, to keep the fruit from shrivelling after losing its juice, when the wind blows steadily. [2] And it is for this reason, too — to make it cooler — that they coat the ceilings, walls, and floors with marble cement. Some people even spread a dining-table in it to dine there; and, in fact, if luxury allows people to do this in a picture gallery, where the scene is set by art, why should they not enjoy a scene set by nature, in a charming arrangement of fruit? Provided always that you do not follow the example set

by some, of buying fruit in Rome and carrying it to the country to pile it up in the fruit-gallery for a dinner-party. [3] Some think that apples keep quite well in the gallery if placed on boards on the cement, but others lay them on straw, or even on wool; that pomegranates are preserved by burying their stems in a jar of sand, and large and small quinces in hanging baskets; while, on the other hand, late Anician pears keep best when put down in boiled must. Some hold that boiled sorbs keep best when cut up and dried in the sun, like pears; and that sorbs are easily kept just as they are, wherever they are put, if the place is dry; that rape should be cut up and preserved in mustard, walnuts in sand. Pomegranates are also kept in sand if they are stored freshly gathered and ripe; green ones also, if you keep them on the branch, put them in a pot with no bottom, bury them in the ground, and seal the ends of the branches so that no outside air can reach them; such fruits will be taken out not only sound but even larger than they would ever be if they had hung on the tree.

LX.

De olivitate oleas esui optime condi scribit Cato orcites et puseas vel virides in muria vel in lentisco contusas. Orcites nigras aridas, sale si sint confriatae dies quinque et tum sale excusso biduum si in sole positae fuerint, manere idoneas solere: easdem sine sale in defrutum condi recte.

[60.1] “Of the olives, Cato writes that the table olives, the orcites, and the posea are best preserved either green or in brine, or, when bruised, in mastic oil. The black orcites, if they are covered with salt for five days after being dried, and then, after the salt has been shaken off, are exposed to the sun for two days, usually keep sound; and that the same varieties may be satisfactorily preserved unsalted in boiled must.

LXI.

Amurcam periti agricolae tam in doleis conduunt quam oleum aut vinum. Eius conditio: cum expressa effluxit, quod statim de ea decoquantur duae partes et refrigeratum conditur in vasa. Sunt item aliae conditiones, ut ea in qua adicitur mustum.

[61.1] “Experienced farmers store their amurca in jars, just as they do oil and wine. The method of preserving is: as soon as it flows out from the press, two-thirds of it is boiled away, and when it is cool it is stored in vessels. There are also other methods, such as that in which must is added.

LXII.

Quod nemo fructus condit, nisi ut promat, de eo quoque vel sexto gradu animadvertenda pauca. Promunt condita aut propterea quod sunt tuenda, aut quod utenda, aut quod vendunda. Ea quod dissimilia sunt inter se, aliut alio tempore tuendum et utendum.

[62.1] “As no one stores the products of the farm except to bring them forth later, a few remarks must be made about this, the sixth step. Preserved things are brought out of storage because they are to be either protected or consumed or sold. As the three operations are for different purposes, the protecting and the consuming take place at different times.

LXIII.

Tuendi causa promendum id frumentum, quod curculiones exesse incipiunt. Id enim cum promptum est, in sole ponere oportet aquae catinos, quod eo conveniunt, ut ipsi se necent, curculiones. Sub terra qui habent frumentum in iis quos vocant sirus, quod cum periculo introitur recenti apertione, ita ut quibusdam sit interclusa anima, aliquanto post promere, quam aperueris, oportet. Far, quod in spicis condideris per messem et ad usus cibatus expedire velis, promendum hieme, ut in pistrino pisetur ac torreatur.

[63.1] “Grain which the weevil has begun to infest should be brought out for protection. When it is brought out, bowls of water should be placed around in the sun; the weevils will congregate at these and drown themselves. Those who keep their grain under ground in the pits which they call sirus should remove the grain some time after the pits are opened, as it is dangerous to enter them immediately, some people having been suffocated while doing so. Spelt which you have stored in the ear at harvest-time and wish to prepare for food should be brought out in winter, so that it may be ground in the mill and parched.

LXIV.

Amurca cum ex olea expressa, qui estumor aquatilis, ac retrimentum conditum in vas fictile. Id quidam sic solent tueri; diebus XV in eo quod est levissimum ac summum deflatum ut traiciant in alia vasa, et hoc isdem intervallis duodeciens sex mensibus proximis item faciant; cum id novissime, potissimum traiciant, cum senescit luna. Tum decocunt in ahenis leni igni, ad duas partes quaad redegerunt. Tum denique ad usum recte promitur.

[64.1] “Amurca, which is a watery fluid, after it is pressed from the olives is stored along with the dregs in an earthenware vessel. Some farmers use the following method for preserving it: After fifteen days the dregs which, being lighter, have risen to the top are blown off, and the fluid is turned into other vessels; this operation is repeated at the same intervals twelve times during the next six months, the last cleansing being done preferably when the moon is waning. Then they boil in copper vessels over a slow fire until it is reduced to two-thirds its volume. It is then fit to be drawn off for use.

LXV.

Quod mustum conditur in dolium, ut habeamus vinum, non promendum dum

fervet, neque etiam cum processit ita, ut sit vinum factum. Si vetus bibere velis, quod non fit, antequam accesserit annus; anniculum prodit. Si est vero ex eo genere uvae, quod mature coacescat, ante vindemiam consumi aut venire oportet. Genera sunt vini, in quo Falerna, quae quanto plures annos condita habuerunt, tanto, cum prompta, sunt fructuosiora.

[65.1] “Must which is stored in jars to make wine should not be brought out while it is fermenting, and not even after the fermentation has gone far enough to make wine. If you wish to drink old wine (and wine is not old enough until a year has been added to its age), it should be brought out when it is a year old. But if it is of the variety of grapes that sours quickly, it must be used up or sold before the next vintage. There are brands of wine, the Falernian for instance, which are the more valuable when brought out the more years you have kept them in store.

LXVI.

Oleas albas quas condideris, novas si celeriter promas, propter amaritudinem respuat palatum; item nigras, nisi prius eas sale maceraris, ut libenter in os recipiantur.

[66.1] “If you take out the preserved white olives soon, while they are fresh, the palate will reject them because of the bitter taste; and likewise the black olives, unless you first steep them in salt so that they may be taken into the mouth without distaste.

LXVII.

Nucem iuglandem et palmulam et ficum Sabinam quanto citius promas, iucundius utare, quod vetustate ficus fit pallidior, palmula cariosior, nux aridior.

[67.1] “As for the walnut, the date, and the Sabine fig, the sooner you use them the better the flavour; for with time the fig gets too pale, the date too soft, and the nut too dry.

LXVIII.

Pensilia, ut uvae, mala et sorba, ipsa ostendunt, quando ad usum oporteat promi, quod colore mutato et contractu acinorum, si non dempseris ad edendum, ad abiciendum descensurum se minitantur. Sorbum maturum mite conditum citius promi oportet; acerbum enim suspensum lentius est, quod prius domi maturitatem adsequi vult, quam nequit in arbore, quam mitescat.

[68.1] “Fruits that are hung, such as grapes, apples, and sorbs, themselves indicate the proper time for consumption; for by the change of colour and the shrivelling of the skin they put you on notice that if you do not take them

down to eat they will come down to be thrown away. If you store sorbs which are ripe and soft, you must use them quickly; those hung up when sour may wait, for they mean, before ripening, to reach in the house a degree of maturity which they cannot reach on the tree.

LXIX.

Messum far promendum hieme in pistrino ad torrendum, quod ad cibatum expeditum esse velis; quod ad sationem, tum promendum, cum segetes maturae sunt ad accipiendum. Item quae pertinent ad sationem, suo quoque tempore promenda. Quae vendenda, videndum quae quoque tempore oporteat promi; alia enim, quae manere non possunt, antequam se commutent, ut celeriter promas ac vendas; alia, quae servari possunt, ut tum vendas, cum caritas est. Saepe enim diutius servata non modo usuram adiciunt, sed etiam fructum duplicant, si tempore promas.

Cum haec diceret, venit libertus aeditumi ad nos flens et rogat ut ignoscamus, quod simus retenti, et ut ei in funus postridie prodeamus. Omnes consurgimus ac simul exclamamus, ‘Quid? in funus? quod funus? quid est factum?’ Ille flens narrat ab nescio quo percussum cultello concidisse, quem qui esset animadvertere in turba non potuisse, sed tantum modo exaudisse vocem, perperam fecisse. Ipse cum patronum domum sustulisset et pueros dimisisset, ut medicum requirerent ac mature adducerent, quod potius illut administrasset, quam ad nos venisset, aecum esse sibi ignosci. Nec si eum servare non potuisset, quin non multo post animam efflaret, tamen putare se fecisse recte. Non moleste ferentes descendimus de aede et de casu humano magis querentes, quam admirantes id Romae factum, discedimus omnes.

[69.1] “The part of the spelt harvest which you wish to have ready for food should be taken out in winter to be roasted at the mill; while the part reserved for seed should be taken out when the land is ready to receive it. With regard to seed in general, each kind should be taken out at its proper time. As to the crops intended for market, care must be used as to the proper time for taking out each; thus you should take out and sell at once those which do not stand storage before they spoil, while you should sell those which keep well when the price is high. For often products which have been stored quite a long time will not only pay interest on the storage, but even double the profit if they are marketed at the right time.”

[2] While he was speaking the sacristan’s freedman runs up to us with tears in his eyes and begs us to pardon him keeping us so long, and asks us to go to a funeral for him the next day. We spring to our feet and cry out in chorus: “What? To a funeral? What funeral? What has happened?” Bursting into tears, he tells us that his master had been stabbed with a knife by someone, and had fallen to the ground; that in the crowd he could not tell who it was, but had only heard a voice saying that a mistake had been made. [3] As he had carried

his old master home and sent the servants to find a surgeon and bring him with all speed, he hoped he might be pardoned for attending to his duty rather than coming to us; and though he had not been able to keep him from breathing his last a few moments later, he thought that he had acted rightly. We had no fault to find with him, and walking down from the temple we went our several ways, rather blaming the mischances of life than being surprised that such a thing had occurred in Rome.

BOOK II

Viri magni nostri maiores non sine causa praeponerant rusticos Romanos urbanis. Ut ruri enim qui in villa vivunt ignaviores, quam qui in agro versantur in aliquo opere faciendo, sic qui in oppido sederent, quam qui rura colerent, desidiosiores putabant. Itaque annum ita diviserunt, ut nonis modo diebus urbanas res usurparent, reliquis septem ut rura colerent. Quod dum servaverunt institutum, utrumque sunt consecuti, ut et cultura agros fecundissimos haberent et ipsi valetudine firmiores essent, ac ne Graecorum urbana desiderarent gymnasia. Quae nunc vix satis singula sunt, nec putant se habere villam, si non multis vocabulis retinniat Graecis, quom vocent particulatim loca, procoetona, palaestram, apodyterion, peristylon, ornithona, peripteron, oporothecen. Igitur quod nunc intra murum fere patres familiae correpserunt relictis falce et aratro et manus movere maluerunt in theatro ac circo, quam in segetibus ac vinetis, frumentum locamus qui nobis advehat, qui saturi fiamus ex Africa et Sardinia, et navibus vindemiam condimus ex insula Coa et Chia.

It was not without pleasure that those great men, our ancestors, put the Romans who lived in the country ahead of those who lived in the city. For as in the country those who live in the villa are lazier than those who are engaged in carrying out work on the land, so they thought that those who settled in town were more indolent than those who dwelt in the country. Hence they so divided the year that they attended to their town affairs only on the ninth days, and dwelt in the country on the remaining seven. [2] So long as they kept up this practice they attained both objects — keeping their lands most productive by cultivation, and themselves enjoying better health and not requiring the citified gymnasia of the Greeks. In these days one such gymnasium is hardly enough, and they do not think they have a real villa unless it rings with many resounding Greek names, places severally called procoetion (ante-room), palaestra (exercise-room), apodyterion (dressing-room), peristylon (colonnade), ornithon (aviary), peripteros (pergola), oporotheca (fruit-room). [3] As therefore in these days practically all the heads of families have sneaked within the walls, abandoning the sickle and the plough, and would rather busy their hands in the theatre and in the circus than in the grain-fields and the vineyards, we hire a man to bring us from Africa and Sardinia the grain with which to fill our stomachs, and the vintage we store comes in ships from the islands of Cos and Chios.

Itaque in qua terra culturam agri docuerunt pastores progeniem suam, qui condiderunt urbem, ibi contra progenies eorum propter avaritiam contra leges ex segetibus fecit prata, ignorantes non idem esse agri culturam et pastionem. Alius enim opilio et arator, nec, si possunt in agro pasci armenta, armentarius non aliud ac bubulcus. Armentum enim id quod in agro natum non creat, sed tollit dentibus; contra bos domitus causa fit ut commodius nascatur

frumentum in segete et pabulum in novali. Alia, inquam, ratio ac scientia coloni, alia pastoris: coloni ea quae agri cultura factum ut nascerentur e terra, contra pastoris ea quae nata e pecore. Quarum quoniam societas inter se magna, propterea quod pabulum in fundo compascere quam vendere plerumque magis expedit domino fundi et stercoratio ad fructus terrestres aptissima et maxime ad id pecus appositum, qui habet praedium, habere utramque debet disciplinam, et agri culturae et pecoris pascendi, et etiam villaticae pastionis. Ex ea enim quoque fructus tolli possunt non mediocres ex ornithonibus et leporariis et piscinis. E quis quoniam de agri cultura librum Fundaniae uxori propter eius fundum feci, tibi, Niger Turrani noster, qui vehementer delectaris pecore, propterea quod te empturientem in campos Macros ad mercatum adducunt crebro pedes, quo facilius sumptibus multa poscentibus ministres, quod eo facilius faciam, quod et ipse pecuarias habui grandes, in Apulia oviarias et in Reatino equarias, de re pecuaria breviter ac summatim percurram ex sermonibus nostris collatis cum iis qui pecuarias habuerunt in Epiro magnas, tum cum piratico bello inter Delum et Siciliam Graeciae classibus praeessem. Incipiam hinc * * *

[4] And so, in a land where shepherds who founded the city taught their offspring the cultivation of the earth, there, on the contrary, their descendants, from greed and in the face of the laws, have made pastures out of grain lands — not knowing that agriculture and grazing are not the same thing. For the shepherd is one thing and the ploughman another; and it does not follow that because cattle can graze in a field the herdsman is the same as the ploughman. For grazing cattle do not produce what grows on the land, but tear it off with their teeth; while on the other hand the domestic ox becomes the cause why the grain grows more easily in the ploughed land, and the fodder in the fallow land. [5] The skill and knowledge of the farmer, I repeat, are one thing, and those of the herdsman another; in the province of the farmer are those things which are made to spring from the earth by cultivation of the land; in that of the herdsman, however, those that spring from the herd. As the association between them is very close, inasmuch as it is frequently more profitable to the owner of the farm to feed the fodder on the place than to sell it, and inasmuch as manure is admirably adapted to the fruits of the earth, and cattle especially fitted to produce it, one who owns a farm ought to have a knowledge of both pursuits, agriculture and cattle-raising, and also of the husbandry of the steading. For from it, too, no little revenue can be derived — from the poultry-yards, the rabbit-hutches, and the fishponds. [6] And since I have written a book for my wife, Fundania, on one of these subjects, that of agriculture, on account of her owning a farm, for you, my dear Turranius Niger, who take keen delight in cattle, inasmuch as your feet often carry you, on buying bent, to market at Campi Macri, that you may more easily meet the outlay incurred by the many demands made upon you, I shall run over briefly and summarily the subject of cattle-raising; and I shall the more readily do this because I have myself owned large stocks of cattle, sheep in Apulia and

horses in the district of Reate. I shall take as the foundation the conversations I had with extensive cattle-owners in Epirus, at the time when, during the war with the pirates, I was in command of the Greek fleets operating between Delos and Sicily. At this point I shall begin. . . .

I.

Cum Menates discessisset, Cossinius mihi, Nos te non dimittemus, inquit, antequam illa tria explicaris, quae coeperas nuper dicere, cum sumus interpellati. Quae tria? inquit Murrius, an ea quae mihi here dixisti de pastoricia re? Ista, inquit ille, quae coeperat hic disserere, quae esset origo, quae dignitas, quae ars * * * Ego vero, inquam, dicam dumtaxat quod est historicon, de duabus rebus primis quae accepi, de origine et dignitate, de tertia parte, ubi est de arte, Scrofa suscipiet, ut semigraecis pastoribus dicam graece, hos per mou pollon ameinon. Nam is magister C. Lucili Hirri, generi tui, cuius nobiles pecuariae in Brutiis habentur. Sed haec ita a nobis accipietis, inquit Scrofa, ut vos, qui estis Epirotici pecuariae athletae, remuneremini nos ac quae scitis proferatis in medium; nemo enim omnia potest scire. Cum accepissem condicionem et meae partes essent primae, non quo non ego pecuarias in Italia habeam, sed non omnes qui habent citharam sunt citharoedi: Igitur, inquam, et homines et pecudes cum semper fuisse sit necesse natura — sive enim aliquod fuit principium generandi animalium, ut putavit Thales Milesius et Zeno Citieus, sive contra principium horum exstitit nullum, ut credidit Pythagoras Samius et Aristoteles Stagerites — necesse est humanae vitae ab summa memoria gradatim descendisse ad hanc aetatem, ut scribit Dicaearchus, et summum gradum fuisse naturalem, cum viverent homines ex his rebus, quae inviolata ultro ferret terra, ex hac vita in secundam descendisse pastoriciam, e feris atque agrestibus ut arboribus ac virgultis decerpendo glandem, arbutum, mora, poma colligerent ad usum, sic ex animalibus cum propter eandem utilitatem, quae possent, silvestria deprenderent ac concluderent et mansuescerent. In quis primum non sine causa putant oves assumptas et propter utilitatem et propter placiditatem; maxime enim hae natura quietae et aptissimae ad vitam hominum. Ad cibum enim lacte et caseum adhibitum, ad corpus vestitum et pelles adtulerunt. Tertio denique gradu a vita pastoralis ad agri culturam descenderunt, in qua ex duobus gradibus superioribus retinuerunt multa, et quo descenderant, ibi processerunt longe, dum ad nos perveniret. Etiam nunc in locis multis genere pecudum ferarum sunt aliquot, ab ovibus, ut in Phrygia, ubi greges videntur complures, in Samothrace caprarum, quas Latine rotas appellant. Sunt enim in Italia circum Fiscellum et Tetricam montes multae. De subus nemini ignotum, nisi qui apros non putat sues vocari. Boves perferi etiam nunc sunt multi in Dardania et Maedica et Thracia, asini feri in Phrygia et Lycaonia, equi feri in Hispania citeriore regionibus aliquot.

[1.1] When Menates had left, Cossinius remarked to me: "We shall not let you

go until you have set forth those three topics of which you had begun to speak when we were interrupted.” “Which three?” inquired Murrius; “do you mean what you were saying to me yesterday about animal husbandry?” “The points our friend here had begun to discuss,” said he, “the origin, the dignity, and science. . .” [2] “Well,” said I, “I shall speak at least of the historical side and tell what I have learned of the two topics first mentioned — the origin and the dignity. Scrofa will take up the tale at the third division, when it becomes a science. He is, if I may quote Greek to half-Greek shepherds, ‘a much better man than I am.’ For he is the man who taught your son-in-law, Gaius Lucilius Hirtius, whose flocks in the country of the Bruttii are renowned.” “But you shall have this discussion by us,” said Scrofa, “only on condition that you, who are the cattle-raising champions of Epirus, shall repay us by disclosing what you know of the subject; for no man can know everything.” [3] When I had accepted the proposal and was to open the play — not that I do not own flocks myself in Italy, but not all who own a harp are harpers” — I began: “As it is a necessity of nature that people and flocks have always existed (whether there was an original generating principle of animals, as Thales of Miletus and Zeno of Citium thought, or, on the contrary, as was the view of Pythagoras of Samos and of Aristotle of Stagira, there was no point of beginning for them), it is a necessity that from the remotest antiquity of human life they have come down, as Dicaearchus teaches, step by step to our age, and that the most distant stage was that state of nature [4] in which man lived on those products which the virgin earth brought forth of her own accord; they descended from this stage into the second, the pastoral, in which they gathered for their use acorns, arbutus berries, mulberries, and other fruits by plucking them from wild and uncultivated trees and bushes, and likewise caught, shut up, and tamed such wild animals as they could for the like advantage. There is good reason to suppose that, of these, sheep were first taken, both because they are useful and because they are tractable; for these are naturally most placid and most adapted to the life of man. For to his food they brought milk and cheese, and to his body wool and skins for clothing. [5] Then by a third stage man came from the pastoral life to that of the tiller of the soil; in this they retained much of the former two stages, and after reaching it they went far before reaching our stage. Even now there are several species of wild animals in various places: as of sheep in Phrygia, where numerous flocks are seen, and in Samothrace those goats which are called in Latin *rotæ*; for there are many wild goats in Italy in the vicinity of Mount Fiscellum and Mount Tetrica. As to swine, everybody knows — except those who think that wild boars ought not to be called swine. There are even now many quite wild cattle in Dardania, Maedica, and Thrace; wild asses in Phrygia and Lycaonia, and wild horses at several points in Hither Spain.

Origo, quam dixi; dignitas, quam dicam. De antiquis illustrissimus quisque pastor erat, ut ostendit et Graeca et Latina lingua et veteres poetae, qui alios vocant *polyarnas*, alios *polymelos*, alios *polybutas*; qui *ipsas* pecudes propter

caritatem aureas habuisse pelles tradiderunt, ut Argis, Atreus quam sibi Thyesten subduxerit queritur; ut in Colchide ad Aetam, ad cuius arietis pellem profecti regio genere dicuntur Argonautae; ut in Libya ad Hesperidas, unde aurea mala, id est secundum antiquam consuetudinem capras et oves, Hercules ex Africa in Graeciam exportavit. Ea enim a sua voce Graeci appellarunt mela. Nec multo secus nostri ab eadem voce, sed ab alia littera (vox earum non me, sed be sonare uidetur), oves belare vocem efferentes, e quo post balare dicunt extrita littera, ut in multis. Quod si apud antiquos non magnae dignitatis pecus esset, in caelo describendo astrologi non appellarent eorum vocabulis signa, quae non modo non dubitarunt ponere, sed etiam ab iis principibus duodecim signa multi numerant, ab ariete et tauro, cum ea praeponerent Apollini et Herculi. Ii enim dei ea secuntur, sed appellantur Gemini. Nec satis putarunt de duodecim signis sextam partem obtinere pecudum nomina, nisi adiecissent, ut quartam tenerent, capricornum. Praeterea a pecuariis addiderunt capram, haedos, canes. An non etiam item in mari terraque ab his regionibus notae, in mari, quod nominaverunt a capris Aegaeum pelagus, ad Syriam montem Taurum, in Sabinis Cantherium montem, Bosporum unum Thracium, alterum Cimmerium? Nonne in terris multa, ut oppidum in Graecia Hippion Argos? Denique non Italia a vitulis, ut scribit Piso? Romanorum vero populum a pastoribus esse ortum quis non dicit? Quis Faustulum nescit pastorem fuisse nutricium, qui Romulum et Remum educavit? Non ipsos quoque fuisse pastores obtinebit, quod Parilibus potissimum condidere urbem? Non idem, quod multa etiam nunc ex vetere instituto bubus et ovibus dicitur, et quod aes antiquissimum quod est flatum pecore est notatum, et quod, urbs cum condita est, tauro et vacca qua essent muri et portae definitum, et quod, populus Romanus cum lustratur suovitautilibus, circumaguntur verres aries taurus, et quod nomina multa habemus ab utroque pecore, a maiore et a minore — a minore Porcius, Ovinus, Caprilus; sic a maiore Equitius, Taurinus, Asinius — et idem cognomina adsignificare quod dicuntur, ut Anni Caprae, Statili Tauri, Pomponi Vituli, sic a pecudibus alia multa?

Relicuum est de scientia pastoralis, de qua est dicendum, quod Scrofa noster, cui haec aetas defert rerum rusticarum omnium palmam, quo melius potest, dicit. Cum convertissent in eum ora omnes, Scrofa, Igitur, inquit, est scientia pecoris parandi ac pascendi, ut fructus quam possint maximi capiantur ex eo, a quibus ipsa pecunia nominata est; nam omnis pecuniae pecus fundamentum. Ea partes habet novem, discretas ter ternas, ut sit una de minoribus pecudibus, cuius genera tria, oves capra sus, altera de pecore maiore, in quo sunt item ad tres species natura discreti, boves asini equi. Tertia pars est in pecuaria quae non parantur, ut ex iis capiatur fructus, sed propter eam aut ex ea sunt, muli canes pastores. Harum una quaeque in se generalis partis habet minimum novenas, quarum in pecore parando necessariae quattuor, alterae in pascendo totidem; praeterea communis una. Ita fiunt omnium partes minimum octoginta et una, et quidem necessariae nec parvae. Primum ut bonum pares pecus,

unum scire oportet, qua aetate quamque pecudem parare habereque expediat. Itaque in bubulo pecore minoris emitur annicula et supra decem annorum, quod a bima aut trima fructum ferre incipit neque longius post decimum annum procedit. Nam prima aetas omnis pecoris et extrema sterilis. E quattuor primis altera pars est cognitio formae unius cuiusque pecudis, qualis sit. Magni enim interest, cuius modi quaeque sit ad fructum. Ita potius bovem emunt cornibus nigrantibus quam albis, capram amplam quam parvam, sues procero corpore, capitibus ut sint parvis. Tertia pars est, quo sit seminio quaerendum. Hoc nomine enim asini Arcadici in Graecia nobilitati, in Italia Reatini, usque eo ut mea memoria asinus venierit sestertiis milibus sexaginta et unae quadrigae Romae constiterint quadringentis milibus. Quarta pars est de iure in parando, quem ad modum quamque pecudem emi oporteat civili iure. Quod enim alterius fuit, id ut fiat meum, necesse est aliquid intercedere, neque in omnibus satis est stipulatio aut solutio nummorum ad mutationem domini. In emptione alias stipulandum sanum esse, alias e sano pecore, alias neutrum.

Alterae partes quattuor sunt, cum iam emeris, observandae, de pastione, de fetura, de nutritu, de sanitate. Pascendi primus locus qui est, eius ratio triplex, in qua regione quamque potissimum pascas et quando et qui, ut capras in montuosis potius locis fruticibus quam in herbidis campis, equas contra. Neque eadem loca aestiva et hiberna idonea omnibus ad pascendum. Itaque greges ovium longe abiguntur ex Apulia in Samnium aestiuatum atque ad publicanum profitentur, ne, si inscriptum pecus paverint, lege censoria committant. Muli e Rosea campestri aestate exiguntur in Burbures altos montes. Qui potissimum quaeque pecudum pascatur, habenda ratio, nec solum quod faeno fit satura equa aut bos, cum sues hoc vitent et quaerant glandem, sed quod hordeum et faba interdum sit quibusdam obiciendum et dandum bubus lupinum et lactariis medica et cytisum; praeterea quod ante admissuram diebus triginta arietibus ac tauris datur plus cibi, ut vires habeant, feminis bubus deditur, quod macescentes melius concipere dicuntur. Secunda pars est de fetura. Nunc appello feturam a conceptu ad partum; hi enim praegnationis primi et extremi fines. Quare primum videndum de admissione, quo quaeque tempore ut ineant facere oporteat. Nam ut suillo pecori a favonio ad aequinoctium vernalis putant aptum, sic ovillo ab arcturi occasu usque ad aquilae occasum. Praeterea habenda ratio, quanto antequam incipiat admissura fieri mares a feminis secretos habeant, quod fere in omnibus binis mensibus ante faciunt et armentarii et opiliones. Altera pars est, in fetura quae sint observanda, quod alia alio tempore parere solet. Equa enim ventrem fert duodecim menses, vacca decem, ovis et capra quinos, sus quattuor. In fetura res incredibilis est in Hispania, sed est vera, quod in Lusitania ad oceanum in ea regione, ubi est oppidum Olisipo, monte Tagro quaedam e vento concipiunt certo tempore equae, ut his gallinae quoque solent, quarum ova hypenemia appellant. Sed ex his equis qui nati pulli, non plus triennium vivunt. Quae nata sunt matura et corda, ut pure et molliter stent videndum et ne obterantur.

Dicuntur agni cordi, qui post tempus nascuntur ac remanserunt in volvis intimis * * * vocant chorion, a quo cordi appellati. Tertia res est, in nutricatu quae observari oporteat, in quo quot diebus matris sugant mammam et id quo tempore et ubi; et si parum habet lactis mater, ut subiciat sub alterius mammam, qui appellantur subrumi, id est sub mamma. Antiquo enim vocabulo mamma rumis, ut opinor. Fere ad quattuor menses a mamma non diiunguntur agni, haedi tres, porci duo. E quis qui iam puri sunt ad sacrificium, ut immolentur, olim appellati sacres, quos appellat Plautus cum ait “quanti sunt porci sacres?” Sic boves atiles ad sacrificia publica saginati dicuntur opimi. Quarta pars est de sanitate, res multiplex ac necessaria, quod morbosum pecus est vitiosum, et quoniam non valet, saepe magna adficiuntur calamitate. Cuius scientiae genera duo, ut in homine, unum ad quae adhibendi medici, alterum quae ipse etiam pastor diligens mederi possit. Eius partes sunt tres. Nam animadvertendum, quae cuiusque morbi sit causa, quaeque signa earum causarum sint, et quae quemque morbum ratio curandi sequi debeat. Fere morborum causae erunt, quod laborant propter aestus aut propter frigora, nec non etiam propter nimium laborem aut contra nullam exercitationem, aut si, cum exercueris, statim sine intervallo cibum aut potionem dederis. Signa autem sunt, ut eorum qui e labore febrem habent adapertum os umido spiritu crebro et corpore calido. Curatio autem, cum hic est morbus, haec: perfunditur aqua et perungitur oleo et vino tepefacto, et item cibo sustinetur, et inicitur aliquid, ne frigus laedat; sitiendi aqua tepida datur. Si hoc genus rebus non proficitur, demittitur sanguis, maxime e capite. Item ad alios morbos aliae causae et alia signa, in omni pecore quae scripta habere oportet magistrum pecoris.

Relinquitur nonum quod dixi, de numero, utriusque partis commune. Nam et qui parat pecus necesse est constituat numerum, quot greges et quantos sit pasturus, ne aut saltus desint aut supersint et ideo fructus dispereant. Praeterea scire oportet, in grege quot feminas habeat, quae parere possint, quot arietes, quot utriusque generis suboles, quot reiculae sint alienandae. In alimoniis, si sunt plures nati, uti quidam faciunt, sequendum ut quosdam subducas, quae res facere solet ut reliqui melius crescant.

Vide, inquit Atticus, ne te fallat et novenae istae partes non exeant extra pecoris minoris ac maioris nomen. Quo pacto enim erunt in mulis et pastoribus novenae partes, ubi nec admissurae nec feturae observantur? In canibus enim video posse dici. Sed do etiam in hominibus posse novenarium retineri numerum, quod in hibernis habent in villis mulieres, quidam etiam in aestivis, et id pertinere putant, quo facilius ad greges pastores retineant, et puerperio familiam faciunt maiorem et rem pecuariam fructuosiorem. Sic, inquam, numerus non est ut sit ad amussim, ut non est, cum dicimus mille naves isse ad Troiam, centumvirale esse iudicium Romae. Quare deme, si vis, duas res de mulis, admissuram et parturam. Vaccius, parturam? inquit, proinde ut non aliquotiens dicatur Romae peperisse mulam. Cui ego ut succinerem,

subicio Magonem et Dionysium scribere, mula et equa cum conceperint, duodecimo mense parere. Quare non, si hic in Italia cum peperit mula sit portentum, adsentiri omnes terras. Neque enim hirundines et ciconiae, quae in Italia pariunt, in omnibus terris pariunt. Non scitis palmulas careotas Syrias parere in Iudaea, in Italia non posse? Sed Scrofa, Si exigere mavis sine mulorum fetura et nutricatu numerum octoginta et unum, est qui expleas duplicem istam lacunam, quod extraordinariae fructum species duae accedunt magnae, quarum una est tonsura, quod oves ac capras detondent aut uellunt; altera, quae latius patet, de lacte et caseo, quam scriptores Graeci separatim tyropoiiian appellaverunt ac scripserunt de ea re permulta.

[6] “The origin is as I have given it; the dignity, as I shall now show. Of the ancients the most illustrious were all shepherds, as appears in both Greek and Latin literature, and in the ancient poets, who call some men ‘rich in flocks,’ others ‘rich in sheep,’ others ‘rich in herds’; and they have related that on account of their costliness some sheep actually had fleeces of gold — as at Argos the one which Atreus complains that Thyestes stole from him; or as in the realm of Aeetes in Colchis, the ram in search of whose golden fleece the Argonauts of royal blood are said to have fared forth; or as among the Hesperides in Libya, from which Hercules brought from Africa to Greece golden mala, which is the ancient manner of naming goats and sheep. For the Greeks called these mela from the sound of their bleating; [7] and in fact our people give them a similar name from the same bleating, but with a different consonant (for the bleating seems to give the sound be, and not me), and they call the bleating of sheep baelare, and hence later, by the excision of a letter, as occurs in many words, balare. But if the flock had not been held in high honour among the ancients, the astronomers, in laying out the heavens, would not have called by their names the signs of the zodiac; they not only did not hesitate to give such names, but many of them begin their enumeration of the twelve signs with the names of the Ram and the Bull, placing them ahead of Apollo and Hercules. For those gods follow them, but are called the Twins. [8] And they were not content to have one-sixth of the twelve signs bear the names of domestic animals, but added Capricornus, so that one-fourth might have them. And besides this, they added of the domestic animals the she-goat, the kid, and the dog. Or are not tracts on land and sea also known by the names of animals? For instance, they named a sea Aegean from the word for goats, a mountain on the border of Syria, Taurus, a mountain in the Sabine country, Cantherius, and two straits Bosphorus (ox-ford) — the Thracian and the Cimmerian. [9] Did they not give such names to many places on land, as, for instance, the city in Greece called ‘Hippion (horse-rearing) Argos’? And, finally, is not Italy named from vituli (bullocks), as Piso states? Further, does not everyone agree that the Roman people is sprung from shepherds? Is there anyone who does not know that Faustulus, the foster-father who reared Romulus and Remus, was a shepherd? Will not the fact that they chose exactly the Parilia as the time to found a city demonstrate that they were

themselves shepherds? Is not the same thing proved by the following facts: that up to this day a fine is assessed after the ancient fashion in oxen and sheep; that the oldest copper coins are marked with cattle; [10] that when the city was founded the position of walls and gates was marked out by a bull and a cow; that when the Roman people is purified by the *suovetaurilia*, a boar, a ram, and a bull are driven around; that many of our family names are derived from both classes, the larger and the smaller, such as Porcius, Ovinus, Caprilius from the smaller, and Equitius, Taurius, Asinius from the larger; and that the so-called *cognomina* [surnames] prove the same thing, as, for instance, the Annii Caprae, the Statilii Tauri, the Pomponii Vituli, and many others, derived from the names of domestic animals?

[11] “It remains to speak of the science of animal husbandry, and our friend, Scrofa, to whom this generation presents the palm in all agricultural matters, and who is therefore better fitted, will discuss it.” When the eyes of all were turned on him Scrofa began:— “Well, there is a science of assembling and feeding cattle in such fashion as to secure the greatest returns from them; the very word for money is derived from them, for cattle are the basis of all wealth. [12] The science embraces nine divisions under three topics of three divisions each: the topic of the smaller animals, with its three divisions, sheep, goats, swine; the second topic, that of the larger animals, with likewise its three classes naturally separate, oxen, asses, horses. The third topic comprises animals which are kept not for the profit derived from them, but for the purpose of the above groups, or as a result of them, mules, dogs, and herdsmen. Each one of these divisions includes at least nine general subdivisions; and of these four are necessarily involved in assembling and an equal number in feeding; while one is common to both. There are, then, at the lowest 81 subdivisions, all of them important and not one insignificant. [13] First: in order to assemble a sound flock one must know one item — at what age it is profitable to get and keep each several kind. Thus, in the matter of cattle, they can be purchased at a lower price below the age of one year and beyond that of ten years, for they begin to yield a profit after the age of two or three, and do not continue to do so much beyond the age of ten years — [14] the earliest youth and extreme age of all animals being barren. The second of the first four heads is a knowledge of the proper characteristics of each species of animal, as this has a very important bearing on the profit. Thus, one buys an ox with dark rather than with white horns, a full-bodied she-goat rather than a thin one, and swine with long bodies provided the head is small. The third point of inquiry is as to the breed; it is for this reason that in Greece the asses of Arcadia are noted, and in Italy those of Reate — so much so that within my recollection an ass fetched 60,000 sesterces, and one team of four at Rome sold for 400,000. [15] The fourth topic is the law of purchase — the proper legal form to be followed in the purchase of each separate species. In order that the property of another may become mine an intermediate step is necessary, and not in all purchases is an agreement or the payment of money

sufficient to effect a change of ownership; and in a purchase it is sometimes to be stipulated that the animal is sound, sometimes that it is from a sound flock, while at other times neither stipulation is made.

[16] "After the purchase has been made we come to the second group of four points which are to be observed: they are those concerned with pasturage, breeding, feeding, and health. Of pasturage, which is the first point, there are three divisions: the preferable locality for the pasturage of the several species, the time, and the manner; thus, it is better to pasture goats on a bushy hillside than on a grassy plain, while the opposite is true of mares. Again, the same localities are not equally suited in summer and winter to the pasturing of all species. Hence, flocks of sheep are driven all the way from Apulia into Samnium for summering, and are reported to the tax-collectors, for fear of offending against the censorial regulation forbidding the pasturing of unregistered flocks; [17] and mules are driven in summer from the level Rosea into the high mountains of Burbur. One must also consider the preferable method of pasturing each species — by which I do not mean merely that a horse or an ox is content with hay, but that barley and beans should be fed at intervals to some of them, and that lupines should be fed to oxen, and alfalfa and clover to milch cows; and besides that for thirty days before mating more food should be given rams and bulls to increase their vigour, and food should be lessened for the females, because it is claimed that they conceive more readily when they are thin. [18] The second topic is that of breeding — by which I mean the process from conception to birth, these being the limits of pregnancy. The first point to be observed, therefore, is that of mating — the time at which opportunity for coition should be allowed each species; thus, the period from the beginning of the west wind to the vernal equinox is deemed best suited to swine, while that from the setting of Arcturus to the setting of Aquila is considered best for sheep. Consideration should also be given to the proper period before breeding begins, during which the males should be kept away from the females — a period which both stockmen and shepherds usually fix at two months for all animals. [19] The second division comprises the points to be watched in breeding, arising from the difference among species in the period of gestation; thus, the mare carries her young twelve months, the cow ten, the sheep and the goat five, the sow four. (Speaking of breeding, there is a story from Spain which, though incredible, is quite authentic, that on the shore of the ocean in Lusitania, in the district in which is situated the town of Olisipo, certain mares on Mount Taurus, at a particular time of year, are impregnated by the wind; just as in this country frequently occurs in the case of those hens the eggs of which are called hypenemia. But the foals of these mares do not live beyond three years.) Care must be taken that the young which have gone the full time or longer have a clean, soft place to stand in, and that they be not trampled. Lambs which are born after the full period are called cordi, the name being derived from the fact that they have remained in those deep-lying folds which are called

chorion. [20] There is a third item — the practice to be observed in the matter of feeding, including the number of days on which the young may have the teat, at what times, and where; and if the mother is deficient in milk, that the young be allowed to suckle the udder of another mother. Such animals are called *subrumi*, ‘under the udder,’ the udder being called *rumis*, as I suppose, in old Latin. As a rule, lambs are not weaned under four months, kids under three, and pigs under two. Those of the last named which are pure for sacrifice and may be offered up, used to be called *sacres*; Plautus uses the term in his sentence: ‘What’s the price of sacred pigs?’ Similarly, oxen, fattened for public offerings, are called *opimi*, fatlings. [21] The fourth division is that of health — a complicated but extremely important matter, inasmuch as a sickly herd is a losing investment, and men frequently come to grief because it is not strong. There are two divisions of such knowledge, as there are in the treatment of human beings: in the one case the physician should be called in, while in the other even an attentive herdsman is competent to give the treatment. The topic has three heads: we must observe the cause of the several diseases, the symptoms displayed by such causes, and the proper method of treatment to be followed for each disease. [22] In general, sickness is caused by the fact that the animals are suffering from heat or from cold, or else from excessive work, or, on the other hand, from lack of exercise; or in case food or drink has been given them immediately after working, without a period of rest. The symptoms are that those which have fever from overwork keep the mouth open, pant fast with moist breath, and have hot bodies. The following is the treatment in such cases: [23] The animal is drenched with water, rubbed down with oil and warm wine, and, further, is sustained with food, and a covering is thrown over it to prevent a chill; in case of thirst tepid water is administered. If improvement is not obtained by such treatment, blood is let, usually from the head. Other diseases have other causes and other symptoms, and the man in charge of the herd should keep them all in written form.

[24] “There remains the ninth point I have mentioned, common to both divisions — the proper number. For the man who is feeding a herd must decide on the size, determining how many herds and how large he is going to graze, so that his pasturage will not run short, and so that he will not have idle pasturage and hence lose his profit. He must also decide how many females to have in the flock for breeding, how many males, how many young of each sex, and how many culls are to be cut out. In the matter of feeding, if too many young are born you should follow the practice of some breeders, and wean some of them; the result usually being that the rest grow better.”

[25] “Don’t get confused,” said Atticus, “and let your ninefold division get away from the matter of smaller and larger animals. How will you get a ninefold division in the case of mules and herdsman, where there is neither breeding nor bearing? [26] I see how you can use it in the case of dogs. I grant you also that even in the case of the humans the ninefold division can be

retained, as they keep women in their huts in the winter ranches, and some have them even in the summer, thinking that this is worth while in order the more easily to keep the herdsmen with their herds; and by the natural increase they enlarge their slave gangs and make the cattle-raising more profitable.” “The number,” I remark, “is not to be taken as precisely accurate, just as we do not mean to be taken exactly when we say that a thousand ships set forth against Troy, or speak of the centumviral court at Rome. So, if you wish, subtract two of the topics, coition and foaling, when you speak of mules.” [27] “Foaling?” asked Vaccius; “why, don’t you know that it has several times been asserted that a mule has borne a colt at Rome?” To back up his statement, I add that both Mago and Dionysius remark that the mule and the mare bring forth in the twelfth month after conception. Hence we must not expect all lands to agree, even if it is considered a portent when a mule bears young here in Italy. Swallows and storks, for instance, which bear in Italy, do not bear in all lands. Surely you are aware that the date-palms of Syria bear fruit in Judea but cannot in Italy. [28] Scrofa, however, remarked: “If you insist on having 81 sub-heads, omitting the breeding and feeding of mules, you may easily fill that double gap; two very important sources of revenue fall outside the enumeration. There is the shearing — the clipping or pulling of wool and goat hair — and another, which is even more important, the matter of milk and cheese. The Greek authorities treat this as a separate topic, calling it tyropoiia (cheese-making), and have had a great deal to say about it.

II.

Sed quoniam nos nostrum pensum absolvimus ac limitata est pecuaria quaestio, nunc rursus vos reddite nobis, o Epirotae, de una quaque re, ut videamus, quid pastores a Pergamidae Maledove potis sint. Atticus, qui tunc Titus Pomponius, nunc Quintus Caecilius cognomine eodem, Ego opinor, inquit, incipiam primus, quoniam in me videre coniecisse oculos, et dicam de primigenia pecuaria. E feris enim pecudibus primum dicis oves comprehensas ab hominibus ac mansuefactas. Has primum oportet bonas emere, quae ita ab aetate, si neque vetulae sunt neque merae agnae, quod alterae nondum, alterae iam non possunt dare fructum. Sed ea melior aetas, quam sequitur spes, quam ea quam mors. De forma ovem esse oportet corpore amplo, quae lana multa sit et molli, villis altis et densis toto corpore, maxime circum cervicem et collum, ventrem quoque ut habeat pilosum. Itaque quae id non habent, maiores nostri apicas appellabant ac reiciebant. Esse oportet cruribus humilibus; caudis observate ut sint in Italia prolixis, in Syria brevibus. In primis videndum ut boni seminis pecus habeas. Id fere ex duabus rebus potest animadverti, ex forma et progenie: ex forma, si arietes sint fronte lana vestiti bene, tortis cornibus pronis ad rostrum, ravis oculis, lana opertis auribus, ampli, pectore et scapulis et clunibus latis, cauda lata et longa. Animadvertendum quoque lingua ne nigra aut varia sit, quod fere qui eam habent nigros aut varios procreant agnos. Ex progenie autem animadvertitur,

si agnos procreant formosos. In emptionibus iure utimur eo, quo lex praescipsit. In ea enim alii plura, alii pauciora excipiunt; quidam enim pretio facto in singulas oves, ut agni cordi duo pro una ove adnumerentur, et si quoui vetustate dentes absunt, item binae pro singulis ut procedant. De reliquo antiqua fere formula utuntur. Cum emptor dixit “tanti sunt mi emptae?” Et ille respondit “sunt” et expromisit nummos, emptor stipulatur prisca formula sic, “illasce oves, qua de re agitur, sanas recte esse, uti pecus ovillum, quod recte sanum est extra luscam surdam minam, id est ventre glabro, neque de pecore morbooso esse habereque recte licere, haec sic recte fieri spondesne?” Cum id factum est, tamen grex dominum non mutavit, nisi si est adnumeratum; nec non emptor pote ex empto vendito illum damnare, si non tradet, quamvis non solverit nummos, ut ille emptorem simili iudicio, si non reddit pretium.

De alteris quattuor rebus deinceps dicam, de pastione, fetura, nutricatu, sanitate. Primum providendum ut totum annum recte pascantur intus et foris; stabula idoneo loco ut sint, ne ventosa, quae spectent magis ad orientem quam ad meridianum tempus. Ubi stent, solum oportet esse eruderatum et proclivum, ut everri facile possit ac fieri purum. Non enim solum ea uligo lanam corrumpit ovium, sed etiam ungulas, ac scabras fieri cogit. Cum aliquot dies steterunt, subicere oportet virgulta alia, quo mollius requiescant purioresque sint; libentius enim ita pascuntur. Faciendum quoque saepta secreta ab aliis, quo incientes secludere possis, item quo corpore aegro. Haec magis ad villaticos greges animaduertenda. Contra illae in saltibus quae pascuntur et a tectis absunt longe, portant secum crates aut retia, quibus cohortes in solitudine faciant, ceteraque utensilia. Longe enim et late in diversis locis pasci solent, ut multa milia absint saepe hibernae pastiones ab aestivis. Ego vero scio, inquam; nam mihi greges in Apulia hibernabant, qui in Reatinis montibus aestivabant, cum inter haec bina loca, ut iugum continet sirpiculos, sic calles publicae distantes pastiones. Eaeque ibi, ubi pascuntur in eadem regione, tamen temporibus distinguuntur, aestate quod cum prima luce exeunt pastum, propterea quod tunc herba roscida meridianam, quae est aridior, iucunditate praestat. Sole exorto potum propellunt, ut redintegrantes rursus ad pastum alacriores faciant. Circiter meridianos aestus, dum defervescent, sub umbriferas rupes et arbores patulas subigunt, quoad refrigeratur. Aere vespertino rursus pascunt ad solis occasum. Ita pascere pecus oportet, ut averso sole agat; caput enim maxime ovis molle est. Ab occasu parvo intervallo interposito ad bibendum appellunt et rursus pascunt, quoad contenebravit; iterum enim tum iucunditas in herba redintegrabit. Haec a uergiliarum exortu ad aequinoctium autumnale maxime observant. Quibus in locis messes sunt factae, inigere est utile duplici de causa: quod et caduca spica saturantur et obtritis stramentis et stercoratione faciunt in annum segetes meliores. Reliquae pastiones hiberno ac verno tempore hoc mutant, quod pruina iam exhalata propellunt in pabulum et pascunt diem totum ac meridiano tempore semel agere potum satis habent.

Quod ad pastiones attinet, haec fere sunt; quod ad feturam, quae dicam. Arietes, quibus sis usurus ad feturam, bimestri tempore ante secernendum et largius pabulo explendum. Cum redierunt ad stabula e pastu, hordeum si est datum, firmiores fiunt ad laborem sustinendum. Tempus optimum ad admittendum ab arcturi occasu ad aquilae occasum, quod quae postea concipiuntur, fiunt vegrandes atque imbecillae. Ovis praegnas est diebus CL. Itaque fit partus exitu autumnali, cum aer est modice temperatus et primitus oritur herba imbribus primoribus evocata. Quam diu admissura fit, eadem aqua uti oportet, quod commutatio et lanam facit variam et corrumpit uterum. Cum omnes conceperunt, rursus arietes secernendi, iam factis praegnatibus quod sunt molesti, obsunt. Neque pati oportet minores quam bimas saliri, quod neque natum ex his idoneum est, neque non ipsae fiunt deteriores; et non meliores quam trimae admissae. Deterrent ab saliendo, et fiscellas e iunco aliave qua re quod alligant ad naturam; commodius servantur, si secretas pascunt.

In nutricatu, cum parere coeperunt, inigunt in stabula, eaque habent ad eam rem seclusa, ibique nata recentia ad ignem prope ponunt, quoad convaluerunt. Biduum aut triduum retinent, dum adgnoscant matrem agni et pabulo se saturent. Deinde matres cum grege pastum prodeunt, retinent agnos, ad quos cum reductae ad vesperum, aluntur lacte et rursus discernuntur, ne noctu a matribus conculcentur. Hoc item faciunt mane, antequam matres in pabulum exeant, ut agni satulli fiant lacte. Circiter decem dies cum praeterierunt, palos offigunt et ad eos alligant libro aut qua alia re levi distantes, ne toto die cursantes inter se teneri delibent aliquid membrorum. Si ad matris mammam non accedet, admovere oportet et labra agni unguere buturo aut adipe suilla et olfacere labra lacte. Diebus post paucis obicere iis viciam molitam aut herbam teneram, antequam exeunt pastum et cum reverterunt. Et sic nutricantur, quoad facti sunt quadrimestres. Interea matres eorum iis temporibus non mulgent quidam; qui id melius, omnino perpetuo, quod et lanae plus ferunt et agnos plures. Cum depulsi sunt agni a matribus, diligentia adhibenda est, ne desiderio senescant. Itaque deliniendum in nutricatu pabuli bonitate et a frigore et aestu ne quid laboret curandum. Cum oblivione iam lactis non desiderat matrem, tum denique compellendum in gregem ovium. Castrare oportet agnum non minorem quinque mensum, neque antequam calores aut frigora se fregerunt. Quos arietes summittere volunt, potissimum eligunt ex matribus, quae geminos parere solent. Pleraque similiter faciendum in ovibus pellitis, quae propter lanae bonitatem, ut sunt Tarentinae et Atticae, pellibus integuntur, ne lana inquinetur, quo minus vel infici recte possit vel lavari ac putari. Harum praesepia ac stabula ut sint pura maiorem adhibent diligentiam, quam hirtis. Itaque faciunt lapide strata, urina necubi in stabulo consistat. His quaecumque lubenter vescuntur, ut folia ficulnea et palea, vinacea, furfures, obiciuntur modice, ne parum aut nimium saturentur. Utrumque enim ad corpus alendum inimicum, ut maxime amicum cytisum et medica. Nam et pingues facit facillime et genit lacte.

De sanitate sunt multa; sed ea, ut dixi, in libro scripta magister pecoris habet, et quae opus ad medendum, portat secum. Relinquitur de numero, quem faciunt alii maiorem, alii minorem. Nulli enim huius moduli naturales. Illud fere omnes in Epiro facimus, ne minus habeamus in centena soves hirtas singulos homines, in pellitas binos.

[2.1] “But since I have completed my task, and the subject of stock-raising has been sketched in outline, you gentlemen of Epirus should take up the tale in your turn and let us see what the shepherds from Pergamis and Maledos can tell us under each head.” [2] Then Atticus, who at the time bore the name Titus Pomponius, but is now called Quintus Cornelius though he retains the same cognomen, began: “I suppose I should start the discussion, as you all seem to be looking to me, and I shall speak of the earliest branch of animal husbandry, as you claim that sheep were the first of the wild animals to be caught and tamed by man. The first consideration is that these be in good condition when purchased; with respect to age that they be neither too old nor mere lambs, the latter being not yet, and the former no longer profitable — though the age which is followed by hope is better than the one which is followed by death. [3] As to form, sheep should be full-bodied, with abundant soft fleece, with fibres long and thick over the whole body, especially about the shoulders and neck, and should have a shaggy belly also. In fact, sheep which did not have this our ancestors called ‘bald’ (apicas), and would have none of them. The legs should be short; and observe that the tail should be long in Italy but short in Syria. The most important point to watch is to have a flock from good stock. [4] This can usually be judged by two points — the form and the progeny; by the form if the ram have a full coating of fleece on the forehead, have flat horns curving towards the muzzle, grey eyes, and ears overgrown with wool; if they are full-bodied, with wide chest, shoulders, and hind-quarters, and a wide, long tail. A black or spotted tongue is also to be avoided, for rams with such a tongue usually beget black or spotted lambs. The stock is determined by the progeny if they beget handsome lambs. [5] In purchasing we take advantage of the variation which the law allows, some making more and others fewer exceptions; thus, some purchasers, when the price is fixed by the head, stipulate that two late-born lambs count as one sheep, and in the case of those which have lost their teeth from age, that they also be reckoned two for one. With this exception, the ancient formula is generally employed: when the purchaser has said, ‘They are sold at such a price?’ and the seller has replied, ‘Yes,’ and the money has passed, the purchaser, using the old formula, says: [6] ‘You guarantee that the sheep in question are perfectly sound, up to the standard of a flock which is perfectly sound, excepting those blind of one eye, deaf, or minae (that is, with belly bare of wool), that they do not come from a diseased flock, and that title may legally pass — that all this may be properly done?’ Even after this has been agreed on, the flock does not change owners unless the money has been counted; and the purchaser still has the right to obtain a judgment against the vendor against the law of purchase and sale if

he does not make delivery, even though no money has passed; just as the vendor may obtain a judgment against the purchaser under the same law if he does not make payment.

[7] “I shall discuss next the remaining four points — pasturage, breeding, feeding, health. It is first to be arranged that they feed properly the year round, indoors and out. The fold should be placed in a suitable situation, protected from the wind, and facing the east rather than the south. The ground on which they are to stand should be clear of undergrowth and sloping, so that it can easily be swept and kept clean; for the moisture of the ground injures not only the fleece of the sheep but their hoofs as well, and causes them to become scabby. [8] When they have been standing for some days, fresh brush should be spread for them, to give them a softer bed and keep them cleaner; for this increases their appetite. Separate enclosures should also be built, so that you may take the pregnant ones away from the flock, and also those that are sick. These measures concern most the flocks which are folded at the steading. [9] On the other hand, in the case of those that feed on the ranges and are far from cover, hurdles or nets are carried with which to make enclosures in a desolate district, as well as other necessary things; for they usually graze far and wide in all sorts of places, so that frequently the winter grazing grounds are many miles away from the summer.” “I am well aware of that,” said I, “for I had flocks that wintered in Apulia and summered in the mountains around Reate, these two widely separated ranges being connected by public cattle-trails, as a pair of buckets by their yoke.” [10] “Such flocks, even when they feed in the same locality, are treated differently at different seasons; thus, in summer they begin feeding at daybreak, because at that time the grass, filled with dew, is superior to the grass of midday, which is drier. At sunrise they are driven to water, to make them more eager to graze when they come back. [11] During the midday heat they are driven under shady cliffs and wide-spreading trees to cool off until the day grows cooler; and they feed again in the evening until sunset. Sheep should be headed in grazing in such a way as to have the sun behind them, as the head of the sheep is its weakest part. A short time after sunset they are driven to water, and then again they graze until it becomes quite dark; for at this time the succulence comes again to the grass. This practice is usually kept up from the rising of the Pleiades until the autumnal equinox. [12] It is profitable to drive them into stubble fields for two reasons: they get their fill of the ears that have fallen, and make the crop better the next year by trampling the straw and by their dung. The feeding during the rest of the year, winter and spring, varies from this, in that when the frost has melted they are driven out to feed and range the whole day, and it is considered sufficient for them to be driven to water only once, at midday.

[13] “With regard to pasturage the foregoing remarks will suffice; the following apply to breeding. The rams which are to be used for breeding are to be removed from the flock two months ahead, and fed more generously. If barley

is fed them on their return to the pens from the pasture, they are strengthened for the work before them. The best time for mating is from the setting of Arcturus to the setting of Aquila; as lambs which are conceived after that time grow undersized and weak. [14] As the period of pregnancy of the sheep is 150 days, the birth thus occurs at the close of autumn, when the air is fairly temperate, and the grass which is called forth by the early rains is just growing. During the whole time of breeding they should drink the same water, as a change of water causes the wool to spot and is injurious to the womb. When all the ewes have conceived, the rams should again be removed, as they are troublesome in worrying the ewes which have now become pregnant. Ewes less than two years old should not be allowed to breed, for the offspring of these is not sturdy and the ewes themselves are injured; and no others are better than the three-year-olds for breeding. They may be protected from the male by binding behind them baskets made of rushes or other material; but they are protected more easily if they feed apart.

[15] "As to feeding: when they begin to bear they are driven into the pens which are kept separate for that purpose; and there the new-born lambs are placed near a fire until they get their strength. They are kept penned for two or three days, while they are learning to recognise their dams and are getting their fill of nourishment. Then the dams go to pasture with the flock, and the lambs are kept penned; when the dams are brought back to them toward evening, the lambs are suckled by them and are again separated to keep them from being trampled by the dams during the night. The same thing takes place in the morning, before the dams go out to pasture, so that the lambs may be filled with milk. [16] When about ten days have passed, stakes are set to which the lambs are fastened at intervals by bark or other smooth ropes, so that the tender young things may not knock the skin off any of their legs while frisking about together during the whole day. If the lamb will not come to its dam's udder, it should be held close and its lips smeared with butter or hog's lard and the lips be given the savour of milk. A few days later ground vetch or tender grass is thrown out to them before they go out to pasture and when they come back; [17] and this feeding is continued until they are four months old. During this time some breeders do not milk the dams; and it is even better not to milk them at all, as they both yield more wool and bear more lambs. When the lambs are removed from the dams, care must be taken that they do not sicken from the separation; and so in feeding they must be coaxed by the daintiness of the food and guarded from being harmed by cold and heat. [18] They must be driven into the flock only after they no longer miss the dam, because they have forgotten the taste of milk. Lambs should be castrated not earlier than the fifth month, and then not until the heat or the cold has broken. Those they wish to rear for rams are chosen preferably from the young of dams which usually bear twins. The treatment is, in general, the same in the case of jacketed sheep — those which, on account of the excellence of the wool, are jacketed with skins, as is the practice at Tarentum and in Attica, to

prevent the fleece from being soiled, in which case it cannot be so well dyed, or washed and bleached. [19] More care is employed in the case of these than in the case of rough-fleeced sheep, to keep the folds and stalls clean; and so they are covered with a stone pavement so that the urine may not stand anywhere in the stalls. To these the food which they prefer, such as fig leaves, straw, grape dregs, and bran, is fed in moderate quantities, to avoid under-feeding or over-feeding; either of which is harmful to their fattening, while alfalfa and snail-clover are both beneficial, as these fatten them very easily and produce milk.

[20] "In the matter of health there are many rules; but, as I said, the head shepherd keeps these written down in a book, and carries with him the remedies he may need. The only remaining division is that of number, and some make this larger, others smaller; for there are no natural limits in this respect. Our almost universal practice in Epirus is not to have less than one shepherd to the hundred rough-fleeced sheep, and two to the hundred jacketed sheep."

III.

Cui Cossinius, Quoniam satis balasti, inquit, o Faustule noster, accipe a me cum Homérico Melanthio cordo de capellis, et quem ad modum breviter oporteat dicere, disce. Qui caprinum gregem constituere vult, in eligendo animadvertat oportet primum aetatem, ut eam paret, quae iam ferre possit fructum, et de iis eam potius, quae diutius; novella enim quam vetus utilior. De forma uidendum ut sint firmae, magnae, corpus leve ut habeant, crebro pilo, nisi si glabrae sunt (duo enim genera earum); sub rostro duas ut mammulas pensiles habeant, quod eae fecundiores; ubere sint grandiore, ut et lac multum et pingue habeant pro portione. Hircus molliori et potissimum pilo albo ac cervice et collo brevi, gurgulione longiore. Melior fit grex, si non est ex collectis comparatus, sed ex consuetis una. De seminio dico eadem, quae Atticus in ovibus; hoc aliter, ovium semen tardius esse, quo eae sint placidiores; contra caprile mobilius esse, de quarum uelocitate in Originum libro Cato scribit haec: "in Sauracti et Fiscello caprae ferae sunt, quae saliant e saxo pedes plus sexagenos". Oves enim, quas pascimus, ortae sunt ab ovibus feris, sic quas alimus caprae a capris feris ortae, a quis propter Italiam Caprasia insula est nominata. De capris quod meliore semine eae quae bis pariant, ex his potissimum mares solent summitti ad admissuras. Quidam etiam dant operam ut ex insula Melia capras habeant, quod ibi maximi ac pulcherrimi existimantur fieri haedi.

De emptione aliter dico atque fit, quod capras sanas sanus nemo promittit; numquam enim sine febris sunt. Itaque stipulantur paucis exceptis verbis, ac Manilius scriptum reliquit sic: "illasc capras hodie recte esse et bibere posse habereque recte licere, haec spondesne?" De quibus admirandum illud, quod

etiam Archelaus scribit: non ut reliqua animalia naribus, sed auribus spiritum ducere solere pastores curiosiores aliquot dicunt.

De alteris quattuor quod est de pastu, hoc dico: Stabulatur pecus melius, ad hibernos exortos si spectat, quod est alsiosum. Id, ut pleraque, lapide aut testa substerni oportet, caprile quo minus sit uliginosum ac lutulentum. Foris cum est pernoctandum, item in eandem partem caeli quae spectent saepta oportet substerni virgultis, ne oblinantur. Non multo aliter tuendum hoc pecus in pastu atque ovillum, tamen habent sua propria quaedam, quod potius silvestribus saltibus delectantur quam pratis; studiose enim de agrestibus fruticibus pascuntur atque in locis cultis virgulta carpunt. Itaque a carpendo caprae nominatae. Ab hoc in lege locationis fundi excipi solet, ne colonus capra natum in fundo pascat. Harum enim dentes inimici sationi, quas etiam astrologi ita receperunt in caelum, ut extra lembum duodecim signorum excluserint; sunt duo haedi at capra non longe a tauro. Quod ad feturam pertinet, desistente autumno exigunt a grege in campo hircos in caprilia, item ut in arietibus dictum. Quae concepit, post quartum mensem reddit tempore verno. In nutricatu haedi, trimestres cum sunt facti, tum submittitur et in grege incipiunt esse. Quid dicam de earum sanitate, quae numquam sunt sanae? Nisi tamen illud unum: quaedam scripta habere magistros pecoris, quibus remediis utantur ad morbos quosdam earum ac vulneratum corpus, quod usu venit iis saepe, quod inter se cornibus pugnant atque in spinosis locis pascuntur. Relinquitur de numero, qui in gregibus est minor caprino quam in ovillo, quod caprae lascivae et quae dispergant se; contra oves quae se congregent ac condensent in locum unum. Itaque in agro Gallico greges plures potius faciunt quam magnos, quod in magnis cito existat pestilentia, quae ad perniciem eum perducat. Satis magnum gregem putant esse circiter quinquagenas. Quibus adsentiri putant id quod usu venit Gaberio, equiti Romano. Is enim cum in suburbano mille iugerum haberet et a caprario quodam, qui adduxit capellas ad urbem decem, sibi in dies singulos denarios singulos dare audisset, coegit mille caprarum, sperans se capturum de praedio in dies singulos denarium mille. Tantum enim fefellit, ut brevi omnes amiserit morbo. Contra in Sallentinis et in Casinati ad centenas pascunt. De maribus et feminis idem fere discrimen, ut alii ad denas capras singulos parent hircos, ut ego; alii etiam ad quindecim, ut Menas; non nulli etiam, ut Murrius, ad viginti.

[3.1] Cossinius, addressing him, said: "As you have bleated long enough, my dear Faustulus, now hear from me, as from Homer's Melanthius born out of due season, with regard to goats; and learn how one ought to speak, briefly and to the point. One who decides to assemble a flock of goats should, in choosing his animals, have regard first to age, picking those of the age which is already capable of bringing in a profit, and this age preferably the one which can bring it longer; for the young goat is more profitable than the old. [2] As to conformation, see that they be strong and large, and have a smooth coat with thick hair, unless, to be sure, they belong to the hairless breed, for there

are two breeds of goats. They should have two teat-like growths hanging under the chin, as such goats are more fertile; they should have rather large udders, so that they may give a greater quantity of milk and of richer quality in proportion. The buck should have hair which is rather soft and by preference white; short shoulders and neck; and a somewhat long throat. The flock is better if it is not formed of animals bought here and there, but of those which are accustomed to run together. [3] As to the breed, I make the remark which Atticus made with regard to sheep; with this exception, that the race of sheep is more quiet, inasmuch as they are gentler, while on the other hand that of goats is more nimble. As to their activity, Cato says in his *Origines*: ‘On Soracte and Fiscellum there are wild goats which make leaps of more than sixty feet from the cliffs.’ For just as the domesticated sheep is sprung from the wild sheep, so the domesticated goat is sprung from the wild goat; and the island Caprasia, off the coast of Italy, derives its name from these. [4] As she-goats which bear twins are of better stock, it is from these, preferably, that the males are usually chosen for service. Some owners are even careful to import she-goats from the island Melia, because it is thought that the largest and finest kids are produced there.

[5] “With regard to purchase, my rule is different from the usual practice, as no man sound of mind guarantees that goats (which are never free of fever) are sound of body. And so the bargain is struck with only a few exceptions made, after a formula derived from the code of Manilius: ‘Do you guarantee that the said goats are to-day in good condition and able to drink, and that the title is in proper form?’ There is a remarkable thing about these animals, and even Archelaus is authority for the statement: some shepherds who have watched quite closely claim that goats do not breathe, as other animals do, through the nostrils, but through the ears.

[6] “Of the other four points, I have this to say with regard to feeding: It is better to have the goat stalls face the sunrise in winter, as the animals feel the cold acutely. Such stalls, and in fact all stalls, should be floored with stone or tile, to prevent the goat-house from being wet and muddy. When they have to spend the night outdoors, their pens should face in the same direction, and they should be bedded down with twigs so that they may not be muddied. The care of this animal in the matter of feeding is about the same as that of the sheep, though each has certain peculiarities; [7] thus, the goat prefers wooded glades to meadows, as it eats eagerly the field bushes and crops the undergrowth on cultivated land. Indeed, their name *capra* is derived from *carpere*, to crop. It is because of this fact that in a contract for the lease of a farm the exception is usually made that the renter may not pasture the offspring of a goat on the place. For their teeth are injurious to all forms of growth; and though the astronomers have placed them in the sky, they have put them outside the circle of the twelve signs — there are two kids and a she-goat not far from Taurus. [8] As to breeding, at the close of autumn, while the

herd is at pasture, the bucks are driven from it into the goat-houses, as was directed with regard to rams. The female which has conceived drops her kid four months later, during the spring. As to rearing, when the kids reach the age of three months they are turned out and begin to form part of the flock. What can I say of the health of animals which are never healthy? I can only make one remark: that the head goatherds keep written directions as to the remedies to be used for some of their diseases and for flesh wounds which they frequently receive, as they are always fighting one another with their horns, and as they crop in thorny places. [9] One topic remains — that of number. This is smaller in the goat herd than in the flock, as goats are wanton and scatter widely, while sheep, on the contrary, huddle together and crowd into the same space. Hence in the *Ager Gallicus* breeders keep numerous herds rather than large ones, because in large herds an epidemic quickly spreads, and this may ruin the owner. [10] A flock of about fifty is considered quite large enough. The experience of the Roman knight, Gaberius, is thought to prove this: He had a place containing 1000 iugera near the city, and hearing from a certain goatherd who drove ten goats to the city that they yielded him a denarius a day per head, he bought 1000 goats, hoping that he would make 1000 denarii a day profit. In which he was sadly mistaken, for within a short time he lost the whole flock by disease. Among the *Sallentini*, however, and around *Casinum*, they have herds running as high as 100. As to the proportion of males to females, there is about the same difference of opinion, some (and this is my own practice) keeping one buck to every ten does; others, such as *Menas*, one to fifteen; and still others, such as *Murrius*, one to twenty.

IV.

Sed quis e portu potius Italico prodit ac de suillo pecore expedit? Tametsi Scrofam potissimum de ea re dicere oportere cognomen eius significat. Cui Tremelius, Ignorare, inquit, videre, cur appeller Scrofa. Itaque ut etiam hi propter te sciant, cognosce meam gentem suillum cognomen non habere, nec me esse ab Eumaeo ortum. Avus meus primum appellatus est Scrofa, qui quaestor cum esset Licinio Nervae praetori in Macedonia provincia relictus, qui praeesset exercitui, dum praetor rediret, hostes, arbitrati occasionem se habere victoriae, impressionem facere coeperunt in castra. Avos, cum cohortaretur milites ut caperent arma atque exirent contra, dixit celeriter se illos, ut scrofa porcos, disiecturum id quod fecit. Nam eo proelio hostes ita fudit ac fugavit, ut eo Nerva, praetor imperator sit appellatus, avus cognomen invenerit ut diceretur Scrofa. Itaque proavos ac superiores de Tremeliis nemo appellatus Scrofa, nec minus septimus sum deinceps praetorius in gente nostra. Nec tamen defugio quin dicam quae scio de suillo pecore. Agri enim culturae ab initio fui studiosus, nec de pecore suillo mihi et vobis, magnis pecuariis, ea res non est communis. Quis enim fundum colit nostrum, quin sues habeat, et qui non audierit patres nostros dicere ignavum et sumptuosum esse, qui succidiam in carnario suspenderit potius ab laniario quam e

domestico fundo?

Ergo qui suum gregem vult habere idoneum, eligere oportet primum bona aetate, secundo bona forma (ea est cum amplitudine membrorum, praeterquam pedibus capite), unicoloris potius quam varias. Cum haec eadem ut habeant verres videndum, tum utique sint cervicibus amplis. Boni seminis sues animadvertuntur a facie et progenie et regione caeli: a facie, si formosi sunt verris et scrofa; a progenie, si porcos multos pariunt; a regione, si potius ex his locis, ubi nascuntur amplae quam exiles, pararis. Emi solent sic: “illasc sues sanas esse habereque recte licere noxisque praestari neque de pecore morbosus esse spondesne?” Quidam adiciunt perfunctas esse a febri et a foria.

In pastu locus huic pecori aptus uliginosus, quod delectatur non solum aqua sed etiam luto. Itaque ob eam rem aiunt lupos, cum sint nancti sues, trahere usque ad aquam, quod dentes fervorem carnis ferre nequeant. Hoc pecus aliter maxime glande, deinde faba et hordeo et cetero frumento, quae res non modo pinguitudinem efficiunt, se etiam carnis iucundum saporem. Pastum exigunt aestate mane et, antequam aestus incipiat, subigunt in umbrosum locum, maxime ubi aqua sit; post meridiem rursus lenito fervore pascunt. Hiberno tempore non prius exigunt pastum, quam pruina evanuit ac colliquefacta est glacies. Ad feturam verres duobus mensibus ante secernendi. Optimum ad admissuram tempus a favonio ad aequinoctium vernum; ita enim contingit ut aestate pariat. Quattuor enim menses est praegnans et tunc parit, cum pabulo abundat terra. Neque minores admittendae quam anniculae; melius viginti menses exspectare, ut bimae pariant. Cum coeperunt, id facere dicuntur usque ad septimum annum recte. Admissuras cum faciunt, prodigunt in lutosos limites ac lustra, ut uolentur in luto, quae enim illorum requies, ut lavatio hominis. Cum omnes conceperunt, rursus segregant verres. Verris octo mensum incipit salire, permanet ut id recte facere possit ad trimum, deinde it retro, quoad pervenit ad lanium. Hic enim conciliator suillae carnis datus populo.

Sus graece dicitur hys, olim thys dictus ab illo verbo quod dicunt thyein, quod est immolare. Ab suillo enim pecore immolandi initium primum sumptum videtur, cuius vestigia, quod initiis Cereris porci immolantur, et quod initiis pacis, foedus cum feritur, porcus occiditur, et quod nuptiarum initio antiqui reges ac sublimes viri in Etruria in coniunctione nuptiali nova nupta et novus maritus primum procum immolant. Prisci quoque Latini, etiam Graeci in Italia idem factitasse videntur. Nam et nostrae mulieres, maxime nutrices, naturam qua feminae sunt in virginibus appellant porcum, et Graecae choeron, significantes esse dignum insigne nuptiarum. Suillum pecus donatum ab natura dicunt ad epulandum; itaque iis animam datam esse proinde ac salem, quae servaret carnem. E quis succidias Galli optimas et maximas facere consuerunt. Optimarum signum, quod etiam nunc quotannis e Gallia

adportantur Romam pernae Comacinae et Cavarae et petasiones. De magnitudine Gallicarum succidiarum Cato scribit his verbis: “in Italia Insubres terna atque quaterna milia aulia succidia vere sus usque adeo pinguitudine crescere solet, ut se ipsa stans sustinere non possit neque progredi usquam. Itaque eas siquis quo traicere volt, in plaustrum imponit”. In Hispania ulteriore in Lusitania sus cum esset occisus, Atilius Hispaniensis, minime mendax et multarum rerum peritus in doctrina, dicebat L. Volumnio senatori missam esse offulam cum duabus costis, quae penderet tres et viginti pondo, eiusque suis a cute ad os pedem et tres digitos fuisse. Cui ego, Non minus res admiranda cum mi esset dicta in Arcadia, scio me isse spectatum suum, quae prae pinguitudine carnis non modo surgere non posset, sed etiam ut in eius corpore sorex exesa carne nidum fecisset et peperisset mures. Hoc etiam in Venetia factum accepi.

Sus ad feturam quae sit fecunda, animadvertunt fere ex primo partu, quod non multum in reliquis mutat. In nutritu, quam porcationem appellant, binis mensibus porcos sinunt cum matribus; secundo, cum iam pasci possunt, secernunt. Porci, qui nati hieme, fiunt propter frigora et quod matres aspernantur propter exiguitatem lactis, quod dentibus sauciantur propterea mammae. Scrofa in sua quaeque hara suos alat oportet porcos, quod alienos non aspernatur et ideo, si conturbati sunt, in fetura fit deterior. Natura divisus earum annus bifariam, quod bis parit in anno: quaternis mensibus fert ventrem, binis nutrit. Haram facere oportet circiter trium pedum altam et latam amplius paulo, ea altitudine abs terra, ne, dum exilire velit praegnas, abortet. Altitudinis modus sit, ut subulcus facile circumspicere possit nequi porcellus a matre opprimatur, et ut facile purigare possit cubile. In haris ostium esse oportet et limen inferius altum palmipedale, ne porci, ex hara cum mater prodit, transilire possint. Quotienscumque haras subulcus purgat, totiens harenam inicere oportet, aut quid item quod exsugat umorem in singulas haras inicere debet; et cum peperit, largiore cibatu sustentare, quo facilius lac suppeditare possit. Quibus hordei circiter binas libras aqua madefactas dare solent, quod quidam duplicant, ut sit mane et vesperi, si alia quae obiciant non habuerint. Cum porci depulsi sunt a mamma, a quibusdam delici appellantur neque iam lactantes dicuntur, qui a partu decimo die habentur puri, et ab eo appellantur ab antiquis sacres, quod tum ad sacrificium idonei dicuntur primum. Itaque aput Plautum in Menaechmis, cum insanum quem putat, ut pietur, in oppido Epidamno interrogat “ quanti hic porci sunt sacres?” Si fundus ministrat, dari solent vinacea ac scopi ex uvis. Amisso nomine lactantes dicuntur nefrendes ab eo, quod nondum fabam frendere possunt, id est frangere. Porcus Graecum est nomen antiquum, sed obscuratum, quod nunc eum uocant choeron. In eorum partu scrofae bis die ut bibant curant lactis causa. Parere dicunt oportere porcos, quot mammas habeat; si minus pariat, fructuariam idoneam non esse; si plures pariat, esse portentum. In quo illud antiquissimum fuisse scribitur, quod sus Aeneae Lavini triginta porcos peperit albos. Itaque quod portenderit factum, post tricesimum annum ut

Lavinenses condiderint oppidum Albam. Huius suis ac porcorum etiam nunc vestigia apparent, quod et simulacra eorum aenea etiam nunc in publico posita, et corpus matris ab sacerdotibus, quod in salsura fuerit, demonstratur. Nutricare octonos porcos parvulos primo possunt; incremento facto a peritis dimidia pars removeri solet, quod neque mater potest sufferre lac, neque congenerati alescendo roborari. A partu decem diebus proximis non producunt ex haris matrem, praeterquam potum. Praeteritis decem diebus sinunt exire pastum in propincuum locum villae, ut crebro reditu lacte alere possint porcos. Cum creverunt, patiuntur sequi matrem pastum domique secernunt a matribus ac seorsum pascunt, ut desiderium ferre possint parentis nutricis, quod decem diebus assecuntur. Subulcus debet consuefacere, omnia ut faciant ad bucinam. Primo cum incluserunt, cum bucinatum est, aperiunt, ut exire possint in eum locum, ubi hordeum fusum in longitudine. Sic enim minus disperit, quam si in acervo positum, et plures facilius accedunt. Ideo ad bucinam convenire dicuntur, ut silvestri loco dispersi ne dispareant. Castrantur verres commodissime anniculi, utique ne minores quam semestres; quo facto nomen mutant atque e verribus dicuntur maiales. De sanitate suum unum modo exempli causa dicam: porcis lactentibus si scrofa lac non potest suppeditare, triticum frictum dari oportet (crudum enim solvit alvum) vel hordeum obici ex aqua, quoad fiant trimestres. De numero in centum sues decem verres satis esse putant; quidam etiam hinc demunt. Greges inaequabiles habent; sed ego modicum puto centenarium; aliquot maiores faciunt, ita ut ter quinquagenos habeant. Porcorum gregem alii duplicant, alii etiam maiorem faciunt. Minor grex quam maior minus sumptuosus, quod comites subulcus pauciores quaerit. Itaque gregis numerum pastor ab sua utilitate constituit, non ut quot verres habeat; id enim ab natura sumendum.

[4.1] “But who sails forth from harbour, and preferably from an Italian harbour, to discourse about swine? I need hardly ask, for that Scrofa should be chosen to speak on that subject this surname of his indicates.” “You seem,” said Tremelius in reply, “not to know why I have the nickname Scrofa. That these gentlemen, too, may learn the reason while you are being enlightened, you must know that my family does not bear a swinish surname, and that I am no descendant of Eumaeus. My grandfather was the first to be called Scrofa. He was quaestor to the praetor Licinius Nerva, in the province of Macedonia, and was left in command of the army until the return of the praetor. The enemy, thinking that they had an opportunity to win a victory, began a vigorous assault on the camp. [2] In the course of his plea to the soldiers to seize arms and go to meet them, my grandfather said that he would scatter those people as a sow scatters her pigs; and he was as good as his word. For he so scattered and routed the enemy in that battle that because of it the praetor Nerva received the title of Imperator, and my grandfather earned the surname of Scrofa. Hence neither my great-grandfather nor any of the Tremelii who preceded him was called by this surname of Scrofa; and I am no less than the seventh man of praetorian rank in succession in our family. [3] Still, I will not

shrink from the task of telling what I know about swine. For I have been a close student of agriculture since my earliest days, and this matter of swine is of equal interest to me and to you who are large cattle-owners. For who of our people cultivates a farm without keeping swine? and who has not heard that our fathers called him lazy and extravagant who hung in his larder a flitch of bacon which he had purchased from the butcher rather than got from his own farm?

“A man, then, who wishes to keep his herd in good condition should select, first, animals of the proper age, secondly, of good conformation (that is, with heavy members, except in the case of feet and head), of uniform colour rather than spotted. You should see that the boars have not only these same qualities, but especially that their shoulders are well developed. [4] The breed of swine is determined by their appearance, their litter, and the locality from which they come: from their appearance if both boar and sow are handsome; from their litter if they produce numerous pigs; from the locality if you get them from places where fat rather than thin swine are produced. [5] The formula of purchase usually runs as follows: ‘Do you guarantee that the said swine are sound, and that the title is good, and that I am protected from suits for damage, and that they are not from a diseased herd?’ Some buyers add the stipulation that they have got through with fever and diarrhoea.

“In the matter of feeding, ground proper for this animal is wet, as it likes not only water but even mud. It is for this reason, they say, that wolves, when they catch swine, always drag them to water, because their teeth cannot endure the heat of the flesh. [6] As this animal feeds chiefly on mast, and next on beans, barley, and other grains, this food produces not only fat but a pleasant flavour in the flesh. In summer they are driven to pasture early in the day, and before the heat grows intense they are driven into a shady spot, preferably where there is water; then in the afternoon, when the heat has diminished, they are again turned out to pasture. In winter they are not turned out until the frost has disappeared and the ice has melted. [7] In the matter of breeding, the boars are to be separated out two months ahead. The best time for service is from the beginning of the west wind to the spring equinox, as in this case the litter is produced in summer. For the sow is pregnant for four months and will thus bear her young when the land is rich in food. Sows should not be bred when less than a year old, and it is better to wait until they are twenty months old, so that they will be two years old when they bear. When they once begin bearing it is said that they continue to do so satisfactorily up to the seventh year. [8] At the time of breeding they are driven into muddy lanes and pools, so that they may wallow in the mud; for this is their form of refreshment, as bathing is to human beings. After all the sows have conceived, the boars are again separated. The boar begins to cover at eight months and keeps his vigour up to three years; after which time he begins to deteriorate until he reaches the butcher, the appointed go-between of pork and the populace.

[9] “The Greek name for the pig is ὕς, once called θύς from the verb θύειν, that is, ‘to sacrifice’; for it seems that at the beginning of making sacrifices they first took the victim from the swine family. There are traces of this in these facts: that pigs are sacrificed at the initial rites of Ceres; that at the rites that initiate peace, when a treaty is made, a pig is killed; and that at the beginning of the marriage rites of ancient kings and eminent personages in Etruria, the bride and groom, in the ceremonies which united them, first sacrificed a pig.

[10] The ancient Latins, too, as well as the Greeks living in Italy, seem to have had the same custom; for our women, and especially nurses, call that part which in girls is the mark of their sex porcus, as Greek women call it choeros, meaning thereby that it is a distinctive part mature enough for marriage. There is a saying that the race of pigs is expressly given by nature to set forth a banquet; and that accordingly life was given them just like salt, to preserve the flesh. The Gauls usually make the best and largest flitches of them; it is a sign of their excellence that annually Comacine and Cavarine hams and shoulders are still imported from Gaul to Rome. [11] With regard to the size of the Gallic flitches, Cato uses this language: ‘The Insubrians in Italy salt down three and four thousand flitches; in spring the sow grows so fat that she cannot stand on her own feet, and cannot take a step; and so when one is to be taken anywhere it is placed in a wagon.’ Atilius of Spain, a thoroughly truthful man and one widely versed in a variety of subjects, used to tell the story that when a sow was killed in Lusitania, a district of Farther Spain, there was sent to the senator Lucius Volumnius a piece of the meat with two ribs attached which weighed •three-and-twenty pounds; and that the meat of that sow was •one foot three fingers thick from skin to bone.” [12] “No less remarkable a thing was told me in Arcadia,” I remarked; “I recall that I went to look at a sow which was so fat that not only could she not rise to her feet, but actually a shrew-mouse had eaten a hole in her flesh, built her nest, and borne her young. I have heard that the same thing occurred in Venetia.”

[13] “It may usually be determined from the first litter which sow is prolific in breeding, as there is not much difference in the number of pigs in the succeeding litters. As to rearing, which is called porculatio, the pigs are allowed to remain with their mothers for two months; in the second month, after they are able to feed, they are removed. Pigs born in winter are apt to grow thin on account of the cold and because the mothers drive them off on account of the scantiness of the milk, and the consequent bruising of their teats by the teeth of the pigs. Each sow should have her separate sty in which to feed her pigs; because she does not drive away the pigs of a strange litter, and so, if they become mixed she deteriorates in breeding. [14] Her year is naturally divided into two parts, as she bears twice a year, being with young for four months and giving suck for two. The sty should be constructed •about three feet high, and a little more than that across, at such a height from the ground that if the sow when pregnant should try to jump out, she will not cast her young. The height of the pen should be such that the swineherd can easily

look around it, to prevent the little pigs from being crushed by the mother, and be able to clean the bottom without trouble. The sty should have a door with the lower sill one and a third feet high, so that the pigs cannot jump over it when the mother leaves the sty. [15] Whenever the swineherd cleans the sty he should always cover the floor with sand, or throw into each sty something to soak up the moisture; and when a sow has young he should feed her more bountifully so that she may more easily supply milk. They are usually fed about two pounds of barley soaked in water; some double this amount, feeding both morning and evening, if they have no other food to give. [16] Pigs when weaned are by some people no longer called 'sucking-pigs,' but *delici* or *shoats*. On the tenth day after birth they are considered 'pure,' and for that reason the ancients called them *sacres*, because they are said to be fit for sacrifice first at that age. Hence in Plautus's play, the *Menaechmi*, the scene of which is laid in Epidamnus, a character who, thinking that another is mad, wants him to make sacrifice and be cured, asks: 'What's the price of *porci sacres* in this town?' Wine dregs and grape refuse are usually fed them if the farm produces these. [17] When they have outgrown the name of sucking-pigs they are called *nefrendes*, from the fact that they are not able to 'crunch' (*frendere*), that is crush, beans. *Porcus* is an old Greek word, but it is obsolete, as they now use the word *choeros*. At the time of bearing, care is taken to see that the sows drink twice a day for the sake of the milk. The saying is that a sow should bear as many pigs as she has teats; if she bear less she will not pay for herself, and if she bear more it is a portent. [18] It is recorded that the most ancient portent of this kind is the sow of Aeneas at Lavinium, which bore thirty white pigs; and the portent was fulfilled in that thirty years later the people of Lavinium founded the town of Alba. Traces of this sow and her pigs are to be seen even to this day; there are bronze images of them standing in public places even now, and the body of the sow is exhibited by the priests, having been kept in brine, according to their account. [19] A sow can feed eight little pigs at first; but when they have taken on weight it is the practice of experienced breeders to remove half of them, as the mother cannot supply enough milk and the whole of the litter cannot grow fat. The mother is not driven out of the sty except for water during the first ten days after delivery; but after this time they are allowed to range for food in near-by parts of the steading, so that they may come back often and feed their pigs. [20] When these are grown they are allowed to follow the mother to pasture; but when they come home they are separated from the mothers and fed apart, so as to grow accustomed to the lack of the mother's nourishment, a point which they reach in ten days. The swineherd should accustom them to do everything to the sound of the horn. At first they are penned in; and then, when the horn sounds, the sty is opened so that they can come out into the place where barley is spread out. This is spread in a row because in that way less is wasted than if it is heaped up, and more of them can reach it easily. The idea in having them gather at the sound of the horn is that they may not become lost when

scattered in wooded country. [21] The best time for castrating the boars is when one year old, and certainly not less than six months; when this is done their name is changed, and they are called 'barrows' instead of boars. As to the health of swine, I shall give but one illustration: if the sow cannot furnish enough milk for the sucking-pigs, toasted wheat should be fed (for raw wheat loosens the bowels), or barley soaked in water, until they are three months old. [22] As to numbers, ten boars are considered enough for 100 sows, and some breeders even lessen this number. The number in a herd varies; for myself I consider a herd of 100 a reasonable number, but some breeders have larger ones, the number sometimes going as high as 150. Some double the size of the herd, and others have even a larger herd. A rather small herd is less expensive than one too large, as the herdsman requires fewer helpers; and so the breeder determines the size of the herd by his own advantage, and not as he determines the number of boars to keep, as this latter point is derived from nature."

V.

Haec hic. At Quintus Lucienus senator, homo quamvis humanus ac iocosus, introiens, familiaris omnium nostrum, Synepirotae, inquit, chairete; Scrofam enim et Varronem nostrum, poimena laon, mane salutavi. Cum alius eum salutasset, alius conviciatus esset, qui tam sero venisset ad constitutum, Videbo iam vos, inquit, balatrones, et hoc adferam meum corium et flagra. Tu vero, Murri, veni mi advocatus, dum asses solvo Laribus, si postea a me repetant, ut testimonium perhibere possis. Atticus Murrio, Narra isti, inquit, eadem, qui sermones sint habiti et quid reliqui sit, ut ad partes paratus veniat; nos interea secundum actum de maioribus adtexamus. In quo quidem, inquit Vaccius, meae partes, quoniam boves ibi. Quare dicam, de bubulo pecore quam acceperim scientiam, ut, siquis quid ignorat, discat; siquis scit, nuncubi labar observet. Vide quid agas, inquam, Vacci. Nam bos in pecuaria maxima debet esse auctoritate, praesertim in Italia, quae a bubus nomen habere sit existimata. Graecia enim antiqua, ut scribit Timaeus, tauros vocabat italos, a quorum multitudine et pulchritudine et fetu uitorum Italiam dixerunt. Alii scripserunt, quod ex Sicilia Hercules persecutus sit eo nobilem taurum, qui diceretur italicus. Hic socius hominum in rustico opere et Cereris minister, ab hoc antiqui manus ita abstineri voluerunt, ut capite sanxerint, siquis occidisset. Qua in re testis Attice, testis Peloponnesos. Nam ab hoc pecore Athenis Buzyges nobilitatus, Argis Bomagiros. Novi, inquit ille, maiestatem boum et ab his dici pleraque magna, ut busycon bupaeda bulimon boopin, uvam quoque bumammam. Praeterea scio hunc esse, in quem potissimum Iuppiter se convertit, cum exportavit per mare e Phoenice amans Europam; hunc esse, qui filios Neptuni a Menalippa servavit, ne in stabulo infantes grex boum obtereret; denique ex hoc putrefacto nasci dulcissimas apes, mellis matres, a quo eas Graeci bugenes appellant; et hunc Plautium locutum esse Latine quam Hirrium praetorem renuntiatum Romam in senatum scriptum

habemus. Sed bono animo es, non minus satisfaciam tibi, quam qui Bugoniam scripsit.

Primum in bubulo genere aetatis gradus dicuntur quattuor, prima vitulorum, secunda iuencorum, tertia bovm novellorum, quarta vetulorum. Discernuntur in prima vitulus et vitula, in secunda iuencus et iuvenca, in tertia et quarta taurus et vacca. Quae sterilis est vacca, taura appellata; quae praegnas, horda. Ab eo in fastis dies hordicidia nominatur, quod tum hordae boves immolantur. Qui gregem armentorum emere vult, observare debet primum, ut sint eae pecudes aetate potius ad fructus ferendos integrae quam iam expartae; ut sint bene compositae, ut integris membris, oblongae, amplae, nigrantibus cornibus, latis frontibus, oculis magnis et nigris, pilosis auribus, compressis malis sublimae, ne gibberae, spina leviter remissa, apertis naribus, labris subnigris, cervicibus crassis ac longis, a collo palea demissa, corpore bene costato, latis umeris, bonis clunibus, codam profusam usque ad calces ut habeant, inferiorem partem frequentibus pilis subcrispam, cruribus potius minoribus rectis, genibus eminulis distantibus inter se, pedibus non latis, neque ingredientibus qui displudantur, nec cuius ungulae divaricent, et cuius ungues sint leves et pares, corium tactu non asperum ac durum, colore potissimum nigro, deinde robeo, tertio helvo, quarto albo; mollissimus enim hic, ut durissimus primus. De mediis duobus prior quam posterior in eo prior, utrique plures quam nigri et albi. Neque non praeterea ut mares seminis boni sint, quorum et forma est spectanda, et qui ex his orti sunt respondent ad parentum speciem. Et praeterea quibus regionibus nati sint refert; boni enim generis in Italia plerique Gallici ad opus, contra nugatorii Ligusci. Transmarini Epirotici non solum meliores totius Graeciae, de etiam quam Italiae. Tametsi quidam de Italicis, quos propter amplitudinem praestare dicunt, victimas faciunt atque ad deorum servant supplicia, qui sine dubio ad res divinas propter dignitatem amplitudinis et coloris praeponendi. Quod eo magis fit, quod albi in Italia non tam frequentes quam in Thracia ad melana kolpon, ubi alio colore pauci. Eos cum emimus domitos, stipulamur sic: "illosce boves sanos esse noxisque praestari"; cum emimus indomitos, sic: "illosce iuencos sanos recte deque pecore sano esse noxisque praestari spondesne?" Paulo verbosius haec, qui Manili actiones secuntur lanii, qui ad cultrum bovem emunt; qui ad altaria, hostiae sanitatem non solent stipulari.

Pascuntur armenta commodissime in nemoribus, ubi virgulta et frons multa; hieme cum hibernant secundum mare, aestu abiguntur in montes frondosos. Propter feturam haec servare soleo. Ante admissuram mensem unum ne cibo et potione se impleant, quod existimantur facilius macrae concipere. Contra tauros duobus mensibus ante admissuram herba et palea ac faeno facio pleniores et a feminis secerno. Habeo tauros totidem, quot Atticus, ad matrices LXX duo, unum anniculum, alterum bimum. Haec secundum astri exortum facio, quod Graeci vocant lyran, fidem nostri. Tum denique tauros in gregem redigo. Mas an femina sit concepta, significat descensu taurus, cum

init, quod, si mas est, in dexterio rem partem abit; si femina, in sinisterio rem. Cur hoc fiat, vos videritis, inquit mihi, qui Aristotelem legis. Non minores oportet inire bimas, ut trimae pariant, eo melius, si quadrimae. Pleraeque pariunt in decem annos, quaedam etiam plures. Maxime idoneum tempus ad concipiendum a delphini exortu usque ad dies quadraginta aut paulo plus. Quae enim ita conceperunt, temperatissimo anni tempore pariunt; vaccae enim mensibus decem sunt praegnates. De quibus admirandum scriptum inveni, exemptis testiculis si statim admiseris taurum, concipere. Eas pasci oportet locis viridibus et aquosis. Cavere oportet ne aut angustius stent aut feriantur aut concurrant. Itaque quod eas aestate tabani concitare solent et bestiolae quaedam minutae sub cauda ali, ne concitentur, aliqui solent includere saeptis. Iis substerni oportet frondem aliudve quid in cubilia, quo mollius conquiescant. Aestate ad aquam appellendum bis, hieme semel. Cum parere coeperunt, secundum stabula pabulum servari oportet integrum, quod egredientes degustare possint; fastidiosae enim fiunt. Et providendum, quo recipiunt se, ne frigidus locus sit; alor enim eas et famis macescere cogit. In alimoniis armenticium pecus sic contuendum. Lactantes cum matribus ne cubent; obteruntur enim. Ad eas mane adigi oportet, et cum redierunt e pastu. Cum creverunt vituli, levandae matres pabulo viridi obiciendo in praeseptis. Item his, ut fere in omnibus stabulis, lapides substernendi aut quid item, ne ungulae putrescant. Ab aequinoctio autumnali una pascuntur cum matribus. Castrare non oportet ante bimatum, quod difficulter, si aliter feceris, se recipiunt; qui autem postea castrantur, duri et inutiles fiunt. Item ut in reliquis gregibus pecuariis dilectus quotannis habendus et reiculae reiciundae, quod locum occupant earum quae ferre possunt fructus. Siquae amisit vitulum, ei supponere oportet eos, quibus non satis praebent matres. Semestribus vitulis obiciunt furfures triticios et farinam hordeaceam et teneram herbam et ut bibant mane et vesperi curant. De sanitate sunt complura, quae exscripta de Magonis libris armentarium meum crebro ut aliquid legat curo. Numerus de tauris et vaccis sic habendus, ut in sexaginta unus sit anniculus, alter bimus. Quidam habent aut minorem aut maiorem numerum; nam apud Atticum duo tauri in septuaginta matribus sunt. Numerum gregum alius facit alium, quidam centenarium modicum putant esse, ut ego. Atticus centum viginti habet, ut Lucienus.

[5.1] So far he. At this point Quintus Lucienus, the senator, a thoroughly kindly and jovial person, and a friend to all the company, entered and said "Greetings, fellow-citizens of Epirus; for to Scrofa and to our friend Varro, shepherd of the people, I paid my greetings this morning." One returned his greeting and another chid him for coming late to his appointment; whereupon he remarked: "I'll see you again presently, my merry men, and bring my skin and whips back with me. But as for you, Murrius, come along as my backer while I am paying my pence to the Lares, so that if they demand them from me later you can bear me witness." [2] "Tell him while you are going," said Atticus to Murrius, "how far our conversation has gone and what has not been

discussed, so that he may come back ready for his part; and let us meanwhile tack on the second act, on the larger animals.” “That is where my part comes in,” said Vaccius, “since there are cows in it. So I shall give the advantage of the knowledge I have acquired on the subject of the cattle herd, so that he who is ignorant may learn, and he who knows may see where I go wrong.” “Watch your step, Vaccius,” said I; [3] “for the cow should be in the highest esteem among cattle, and especially in Italy, which is supposed to have derived its name from the word for oxen. For the ancient Greeks, according to Timaeus, called bulls *itali*, and the name Italy was bestowed because of the number and beauty of its cattle, and the great number of calves. Others say it is so named from the fact that Hercules chased hither from Sicily a noble bull which was called *italus*. This is man’s partner in his rustic labours and is the servant of Ceres; [4] and hence the ancients so wished his life to be safe that they made it a capital offence to kill one. In this matter Attica is witness as well as Peloponnesus; for it is to this animal that Buzuges owes his fame at Athens, and Bomagiros at Argos.” “I am acquainted,” replied Vaccius, “with the high esteem in which oxen are held, and the fact that many large things are named from them, such as *busycos* (bull fig), *bupais* (bull-boy), *bulimos* (bull hunger), *boopis* (cow-eyed), and that a grape also has the name *bumamma* (cow’s udder). [5] I know, further, that it was this animal into which Jupiter chose to change himself when he carried his beloved Europa over the sea from Phoenicia; that it was this animal which saved the sons of Neptune by Menalippa from being trampled in the stall, when they were infants, by a herd of cattle; further, that it is from the putrefied body of this animal that there spring the sweetest bees, those honey-mothers from which the Greeks therefore call bees ‘the ox-sprung’ (*βουγενεῖς*); and we have the official record that the praetor reported to the Senate at Rome that it was this animal which said, in Latin, ‘Plautius rather than Hirrius.’ So be of good cheer; I shall give you as much satisfaction as the author of the *Bugonia* could.

[6] “First: in the race of cattle four stages of life are distinguished, the first that of calf, the second that of yearling, the third that of prime, the fourth that of old; and a distinction of sex is indicated in each sex, in the first by bull-calf and heifer-calf, in the second by bullock and heifer, and in the third and fourth by bull and cow. A sterile cow is called *taura*, and a pregnant cow is called *horda*. It is from the fact that at that time pregnant cows are sacrificed that one of the days in the calendar is called *hordicidia*. [7] One who wishes to buy a herd of cattle should be careful to have animals of such an age that they are sound for bearing calves rather than those which have already reached the age of barrenness. They should be well formed, that is, clean-limbed, square-built, large, with blackish horns, wide foreheads, large black eyes, hairy ears, narrow jaws, somewhat snub-nosed, not humpbacked, but with a slight depression of the spine, spreading nostrils, blackish lips, [8] thick, long neck, with dewlap hanging from it, body well ribbed, broad shoulders, sturdy rump, a long tail hanging down to the ankles, curling somewhat at the end with thick

hair, with legs rather short and straight, knees prominent and a good distance apart, feet not wide and not splaying as they walk, the hoofs not widely cloven but with the two toes smooth and of equal size, the skin not hard and rough to touch. The best colour is black, next red, then dun, and then white; for those of the last mentioned colour are most delicate, and those of the first most hardy. [9] Of the other two colours the first is preferable to the second, while both are more common than the black and the white. He should furthermore see that the males be of good breed, and their conformation should be looked to, for their young reproduce the characteristics of the parents. It is also a matter of importance where they are born; thus in Italy many Gallic oxen of good breed are good workers, while the Ligurian are of small account; [10] of foreign cattle those of Epirus are not only the best in all Greece, but are even better than the Italian. Yet some people use cattle of Italian breeds, which they claim excel in size, as offerings, and these they reserve for solemn offerings to the gods. These are doubtless to be preferred for sacrificial purposes because of the splendour of their size and colour; and this is done all the more because white cattle are not so common in Italy as they are in Thrace on the shores of the Black Gulf where there are few of any other colour. In the purchase of oxen which have been broken in, the bargain is in these terms: 'Do you guarantee that the said oxen are sound, and that I am protected from suits for damage?' [11] In buying them unbroken, the formula runs: 'Do you guarantee that the said bullocks are quite sound and of a sound herd, and that I am protected from suits for damage?' Butchers use a somewhat fuller form, following the rule of Manilius, in buying for slaughter; those who buy for sacrifice do not usually demand a guarantee of soundness in the victim.

"Large cattle are most conveniently pastured on wooded land where there is much undergrowth and foliage; and those that spend the winter along the coast are driven in summer into the leafy hills. In the matter of breeding I usually follow these principles: [12] for one month before they are mated, cows should not have their fill of food and drink, because it is thought that when thin they are in better condition to conceive. On the other hand, I keep the bulls filled with grass, straw, and hay for two months before mating; and I keep them away from the females. I keep the same number of bulls as Atticus — two to every 70 brood cows — one a yearling, the other a two-year-old. I attend to this matter following the rising of the constellation which the Greeks call Lyra, and which our people call Fides — [13] it is only then that I turn the bulls into the herd. The bull shows by the way he dismounts whether a male or female has been conceived by his act: if it is a male he comes down on the right side, and if a female on the left. Why this is true," he remarked to me, "you who read Aristotle will have to find out. Cows should not be covered which are less than two years old, so that they may be three years old when they bear; and it will be all the better if they are four years old. Most of them continue bearing up to ten years, and some of them even longer. The best time for mating is from the rising of the Dolphin up to forty days or a little more;

for cows which conceive at that time drop their calves at the most temperate season, as cows carry their calves for ten months. [14] On this subject I have seen a remarkable statement — that if you turn in a bull immediately after he has been castrated, he can get a calf. The cows should be pastured in grassy and watered ground, and care should be taken not to let them crowd, be struck, or run against one another. As cattle-flies have a way of tormenting them in summer and certain minute insects grow under their tails, some breeders keep them shut up in pens, to keep them from being worried. The pens should be strewn with a bedding of leaves or some such thing, so that they may rest in greater comfort. In summer they should be driven to water twice, in winter once. [15] When they come to the time of calving, fresh fodder should be kept near the stalls for them to nibble at as they go out, for they become dainty. Care should also be taken that the place into which they turned shall not be chilly, for chill and hunger make them grow thin. [16] In the matter of rearing, the following rules should be observed with this kind of animal: Sucklings must not sleep with their dams, as they will be trampled; they should be admitted to their dams in the morning and when they have come back from pasture. When the calves have made some growth, the dams should be relieved by throwing green food before the calves in the pens. These stalls (and this holds good for practically all stalls) should be paved with stones or something of the sort, so that their hoofs may not rot. After the autumnal equinox calves pasture along with their dams. [17] They should not be castrated until they are two years old, because it is hard for them to recover otherwise; while those which are castrated later become tough and worthless. Just as in the case of other herds, there should be a culling once a year, and the culls should be cut out of the herd, as they take up the room of those which can bring in a profit. If a cow has lost her calf she should be given some whose dams do not give enough milk. Calves six months old are fed wheat bran and barley-meal and tender grass, and care is taken that they drink morning and evening. [18] On the subject of health there are many rules; these have been copied down from Mago's treatise, and I see to it that my head herdsman is reading some of them repeatedly. As to the number of bulls and cows, the rule is that there be, to every sixty cows, one yearling bull and one two-year-old. Some breeders make the number smaller or larger; as, for instance, in Atticus's herd there are two bulls to seventy breeding cows. The number of animals in a herd varies with the owner, some breeders (and I am one of them) considering a hundred a reasonable number. But Atticus has 120, as does Lucienus."

VI.

Haec ille. At Murrius, qui, dum loquitur Vaccius, cum Lucieno redisset, Ego, inquit, de asinis potissimum dicam, quod sum Reatinus, ubi optimi et maximi fiunt, e quo seminio ego hic procreavi pullos et ipsis Arcadibus vendidi aliquotiens. Igitur asinorum gregem qui facere vult bonum, primum videndum

ut mares feminasque bona aetate sumat, utrique ut quam diutissime fructum ferre possint; firmos, omnibus partibus honestos, corpore amplo, seminio bono, ex his locis, unde optumi exeunt, quod faciunt Peloponnesi cum potissimum eos ex Arcadia emant, in Italia ex agro Reatino. Non enim, si murenarum optimarum flumarum sunt in Sicilia et helops ad Rhodon, continuo hi pisces in omni mari similes nascuntur. Horum genera duo: unum ferum, quos vocant onagros, ut in Phrygia et Lycaonia sunt greges multi; alterum mansuetum, ut sunt in Italia omnes. Ad seminationem onagrus idoneus, quod et e fero fit mansuetus facile et e mansueto ferus numquam. Quod similes parentum genuntur, eligendi et mas et femina cum dignitate ut sit. In mercando item ut ceterae pecudes emptionibus et traditionibus dominum mutant, et de sanitate ac noxa solet caveri. Commode pascuntur farre et furfuribus hordeaceis. Admittuntur ante solstitium, ut eodem tempore alterius anni pariant; duodecimo enim mense conceptum semen reddunt. Praegnantes opere levant; venter enim labore nationem reddit deteriore. Marem non deiungunt ab opere, quod remissione laboris fit deterior. In partu eadem fere observant, quae in equis. Secundum partum pullos anno non remouent a matre. Proximo anno noctibus patiuntur esse cum his et leniter capistris aliave qua re habent vinctos. Tertio anno domare incipiunt ad eas res, ad quas quisque eos vult habere in usu. Relinquitur de numero, quorum greges non sane fiunt, nisi ex eis qui onera portant, ideo quod plerique diducuntur ad molas aut ad agriculturam, ubi quid vehendum est, aut etiam ad arandum, ubi levis est terra, ut in Campania. Greges fiunt fere mercatorum, ut eorum qui e Brundisino aut Apulia asellis dossuariis comportant ad mare oleum aut vinum itemque frumentum aut quid aliud.

[6.1] So far Vaccius. Then Murrius, who had returned with Lucienus while Vaccius was speaking, said: "I shall speak by preference on the subject of asses, as I am from Reate, where the best and largest are grown; out of this stock I have bred colts here and several times sold them even to Arcadians. [2] One who wishes, then, to start a good herd of asses should first be careful to get males and females of the proper age, so that they both may continue to bring in a profit as long as possible. They should be sturdy, sound in all parts, full-bodied, of good stock, and from those districts from which the best come; this is a point considered by those breeders in Peloponnesus who, by preference, buy in Arcadia, and those in Italy who buy in the neighborhood of Reate. For it does not at all follow that, because the best 'floating' lampreys grow in Sicily and the helops off Rhodes, these fish grow of the same excellence in all seas. There are two species of these animals: the wild ass, called onagrus, [3] of which there are many herds, as, for instance, in Phrygia and Lycaonia; and the domesticated, such as are all those in Italy. The wild ass is well suited for breeding, because he is easily changed from wild to tame and never changes back from tame to wild. As the young reproduce the qualities of their parents, both sire and dam should be chosen with an eye to their worth. In the matter of transfer of title, they change owners, as do other

animals, by purchase and delivery; and there is the usual guarantee of soundness and against liability for damage. [4] The best food for them is spelt and barley bran. They are bred before the solstice, so that they may drop their colts at the same season the next year; for they foal in the twelfth month after conception. Pregnant jennies are relieved of work, as work makes the womb bear a poorer offspring. The male is not kept from work, as he loses vigour from lack of labour. In the matter of foaling about the same rules are followed as in the case of mares. The young are not separated from their dams for a year after birth; but during the next year they are allowed to be with them at night, and are kept loosely tied with a leather halter or the like. In the third year they begin their training for the work for which their owners wish to keep them. [5] There remains the question of number; but there really are no herds of these animals except of those which form pack trains, for the reason that they are usually separated and sent to the mills, or to the fields for hauling, or even for ploughing where the land is porous, as it is in Campania. The trains are usually formed by the traders, as, for instance, those who pack oil or wine and grain or other products from the region of Brundisium or Apulia to the sea in donkey panniers."

VII.

Lucienus: Ego quoque adveniens aperiam carceres, inquit, et equos emittere incipiam, nec solum mares, quos admissarios habeo, ut Atticus, singulos in feminas denas. E quis feminas Q. Modius Equiculus, vir fortissimus, etiam patre militari, iuxta ac mares habere solebat. Horum equorum et equarum greges qui habere voluerunt, ut habeant aliqui in Peloponneso et in Apulia, primum spectare oportet aetatem, quam praecipunt sic. Videmus ne sint minores trimae, maiores decem annorum. Aetas cognoscitur et equorum et fere omnium qui ungulas indivisas habent et etiam cornutarum, quod equus triginta mensibus primum dentes medios dicitur amittere, duo superiores, totidem inferiores. Incipientes quartum agere annum itidem eiciunt et totidem eiciunt proximos eorum quos amiserunt, et incipiunt nasci, quos vocant columellares. Quinto anno incipiente item eodem modo amittere binos, cum cavos habeat tum renascentes, ei sexto anno impleri, septumo omnes habere solet renatos et completos. Hoc maiores qui sunt, intellegi negant posse, praeterquam cum dentes sint facti brocchi et supercilia cana et sub ea lacunae, ex observatu dicunt eum equum habere annos sedecim. De forma esse oportet magnitudine modica, quod nec vastos nec minutos decet esse, equas clunibus ac ventribus latis. Equos, ad admissuram quos velis habere, legere oportet amplo corpore, formosos, nulla parte corporis inter se non congruenti. Qualis futurus sit equus, e pullo coniectari potest: si caput habet non magnum nec membris confusis si est, oculis nigris, naribus non angustis, auribus applicatis, iuba crebra, fusca, subcrispa subtenuibus saetis, implicata in dexteriorem partem cervicis, pectus latum at plenum, umeris latis, ventre modico, lumbis deorsum versus pressis, scapulis latis, spina maxime duplici, si minus, non

exstanti, coda ampla subcrispa, cruribus rectis aequalibus intro versus potius figuratis, genibus rutundis ne magnis, ungulis duris; toto corpore ut habeat venas, quae animadverti possint, quod qui huiusce modi sit, cum est aeger, ad medendum appositus. De stirpe magni interest qua sint, quod genera sunt multa. Itaque ab hoc nobiles a regionibus dicuntur, in Graecia Thessalici equi a Thessalia, in Italia ab Apulia Apuli, ab Rosea Roseani. Equi boni futuri signa, si cum gregalibus in pabulo contendit in currendo aliave qua re, quo potior sit; si, cum flumen travehundum est gregi, in primis progreditur ac non respectat alios. Emptio equina similis fere ac boum et asinorum, quod eisdem rebus in emptione dominum mutant, ut in Manili actionibus sunt perscripta.

Equinum pecus pascendum in pratis potissimum herba, in stabulis ac praeseptibus arido faeno; cum pepererunt, hordeo adiecto, bis die data aqua. Horum feturae initium admissionis facere oportet ab aequinoctio verno ad solstitium, ut partus idoneo tempore fiat; duodecimo enim mense die decimo aiunt nasci. Quae post tempus nascuntur, fere vitiosa atque inutilia existunt. Admittere oportet, cum tempus anni venerit, bis die, mane et vespere, per origam; sic appellatur qui admittit. Eo enim adiutante, equa alligata, celerius admittuntur, neque equi frustra cupiditate impulsus semen eiciunt. Quoad satis sit admitti, ipsae significant, quod se defendunt. Si fastidium salendi est, scillae medium conterunt cum aqua ad mellis crassitudinem; tum ea re naturam equae, cum menses ferunt, tangunt; contra ab locis equae nares equi tangunt. Tametsi incredibile, quod usu venit, memoriae mandandum. Equus matrem salire cum adduci non posset, cum eum capite obvoluto auriga adduxisset et coegisset matrem inire, cum descendenti dempsisset ab oculis, ille impetum fecit in eum ac mordicus interfecit. Cum conceperunt equae, videndum ne aut laborent plusculum aut ne frigidis locis sint, quod algor maxime praegnatis obest. Itaque in stabulis et umore prohibere oportet humum, clausa habere ostia ac fenestras, et inter singulas a praeseptibus intericere longurios, qui eas discernant, ne inter se pugnare possint. Praegnatem neque implere cibo neque esurire oportet. Alternis qui admittant, diuturniores equas, meliores pullos fieri dicunt, itaque ut restibiles segetes esse exsuctiores, sic quotannis quae praegnantem fiant.

In decem diebus secundum partum cum matribus in pabulum prodigendum, ne ungulas comburat stercus tenellas. Quinquemestribus pullis factis, cum redacti sunt in stabulum, obiciendum farinam hordeaceam molitam cum furfuribus, et siquid aliud terra natum libenter edent. Anniculis iam factis dandum hordeum et furfures, usque quoad erunt lactantes. Neque prius biennio confecto a lacte removendum; eosque, cum stent cum matribus, interdum tractandum, ne, cum sint diiuncti, exterreantur; eademque causa ibi frenos suspendendum, et eculi consuescant et videre eorum faciem et e motu audire crepitus. Cum iam ad manus accedere consuerint, interdum imponere iis puerum bis aut ter primum in ventrem, postea iam sedentem. Haec facere, cum sit trimus; tum enim maxime crescere ac lacertosum fieri. Sunt qui dicant

post annum et sex menses eculum domari posse, sed melius post trimum, a quo tempore farrago dari solet. Haec enim purgatio maxime necessaria equino pecori. Quod diebus decem facere oportet, nec pati alium ullum cibum gustare. Ab undecimo die usque ad quartum decimum dandum hordeum, cottidie adicientem minutatim; quod quarto die feceris, in eo decem diebus proximis manendum. Ab eo tempore mediocriter exercendum et, cum consudarit, perunguendum oleo. Si frigus erit, in equili faciendus ignis.

Equi quod alii sunt ad rem militarem idonei, alii ad vecturam, alii ad admissuram, alii ad cursuram, non item sunt spectandi atque habendi. Itaque peritus belli alios eligit atque alit ac docet; aliter quadrigarius ac desultor; neque idem qui vectorios facere vult ad ephippium aut ad raedam, quod qui ad rem militarem, quod ut ibi ad castra habere volunt acres, sic contra in viis habere malunt placidos. Propter quod discrimen maxime institutum ut castrentur equi. Dempitis enim testiculis fiunt quietiores, ideo quod semine carent. Ii cantherii appellati, ut in subus maiales, gallis gallinaceis capi. De medicina vel plurima sunt in equis et signa morborum et genera curationum, quae pastorem scripta habere oportet. Itaque ab hoc in Graecia potissimum medici pecorum hippiatroi appellati.

[7.1] "I too," broke in Lucienus, "shall open the barriers as I come, and begin to let out the steeds, and not the stallions only, which I keep for breeding, as Atticus does, one to every ten mares. The females of these Quintus Modius Equiculus, a very gallant gentleman whose father was also a soldier, used to value as highly as the males. Those who wish to establish a herd of horses and mares, as some do in the Peloponnesus and in Apulia, should first have an eye to age; and the following rules are laid down: We are careful to have them not less than three nor more than ten years old. [2] The age of horses and of almost all animals with solid hoof, and in fact of those with horns, is determined by the teeth, the horse being said to drop, at thirty months, first the middle teeth, two upper and as many lower; at the beginning of the fourth year they again cast, this time dropping the same number of those coming next to those which they have lost; and to so-called canine teeth begin to grow. [3] At the beginning of the fifth year they again shed two in each jaw in the same way, as at that time the animal has hollow fresh teeth which fill out in the sixth year, so that in the seventh it usually has a full set of permanent teeth. It is said that there is no way of determining those which are older than this, except that when the teeth become prominent and the brows grey with hollows under them, they determine by looking at him that such a horse is sixteen years old. [4] As to conformation they should be of moderate size, neither over nor under size, and the mares should have broad quarters and bellies. Stallions kept for breeding should be chosen of broad body, handsome, with no part of the body breaking the harmony. [5] What sort of a horse is going to turn out can be determined from the colt: if it has a head not over size and well-proportioned limbs, dark eyes, full nostrils, close-lying ears; mane abundant, dark, slightly

curling, with very fine hair falling on the right side of the neck; broad, full chest, broad shoulders, fair-sized barrel, flanks converging downward, broad shoulder-blades, preferably with a double spine or at least with the backbone not prominent, full, somewhat curly tail, legs straight and sloping symmetrically rather inward than outward, the knees round but not large, and hard hoofs. The veins should be visible over the whole body, as a horse of this kind is capable of easy treatment when it is sick. [6] The stock from which they come is of great importance, as there are a number of breeds; hence noted breeds are named from the districts from which they come, as in Greece the Thessalian from Thessaly, in Italy the Apulian from Apulia, and the Rosean from Rosea. It is a sign that the horse will be a good one if, when in pasture with its mates, it vies with them in racing or in other ways to show its superiority; if, when a river is to be crossed by the herd, it runs with the leaders and does not look back at the rest of the herd. The terms of purchase for horses are practically the same as those for cattle and asses, as they change owners by purchase on the same terms, as laid down in the decisions of Manilius.

[7] “The breeding stud of horses is best fed in meadows on grass, and in stalls and enclosures on dry hay; and when they have foaled, with an additional ration of barley, and with water twice a day. In the matter of breeding, the beginning of mating should be at the vernal equinox and it should continue until the solstice, so that the foal may come at a seasonable time; for it is said that they are born on the tenth day of the twelfth month after conception. Foals which are born after this time are usually defective and unprofitable. [8] When the proper season arrives, the stallion should be admitted twice daily, morning and evening, with the help of the groom — as they call the man who attends to the mating. For with his help, when the mare is tied, the coition takes place more quickly, and the stallions do not, in their eagerness, eject the seed to no purpose. The mares show when they have conceived by defending themselves. If the horse will not cover the mare, the centre of a squill is crushed in water and reduced to the consistency of honey; with this the natural parts of the mare are touched when she is in heat, and on the other hand the nostrils of the horse are touched with what comes from the natural parts of the mare. [9] (Though it is incredible, as it actually happened the following story should be recorded: when a horse could not be induced to mount his dam, the groom covered his head, led him up, and forced him to do so; but when he took the cloth from the horse’s eyes after he had come down, the horse dashed at him and killed him with his teeth.) [10] Care must be taken that the mares, after conceiving, are not worked over hard or kept in cold places, as chill is extremely injurious to those with foal. So in their stalls the ground should be kept free of dampness, the doors and windows should be kept shut, and poles should be placed in the pen to separate each mare, so that they cannot fight one another. A mare with foal should not be over-fed or under-fed. [11] Those who mate their mares every other year claim that they breed for a longer time

and that the colts are better; and that those which become pregnant every year are sooner exhausted, just as are fields which are planted every year.

“Within ten days after birth colts should be driven to pasture with their dams, so that the dung may not burn their tender hoofs. When the colts are five months old, on being driven back to the stable they should have spread before them barley-meal ground with bran, and whatever other product of the soil they relish. [12] When they become yearlings they should be fed with barley and bran so long as they suckle. And they should not be removed before the end of two years; and while they are still with the dam they should be handled from time to time, to prevent them from being frightened when they are separated. For the same purpose harness should be hung in the stall, so that the young horses may become accustomed both to the sight of it and to its jingling when it moves. [13] As soon as they have become accustomed to coming up and being handled it is well to let a boy mount them two or three times, first lying flat on his stomach and then seated. This should be done when the colt is a three-year-old, for at that age it is growing most rapidly, and putting on muscle. Some breeders claim that a young horse can be broken at eighteen months; but it is better to wait until they are three-year-olds; from which time it is customary to feed mixed forage, for this is a most necessary form of purging for horses. It should be fed for ten days, and the horse should be allowed to taste no other food. [14] From the eleventh to the fourteenth day barley should be fed, the amount being increased gradually from day to day; and the amount fed on the fourth day should be continued for the next ten days. After that time he should have gentle exercise, and be rubbed down with oil after he has sweated. If the weather is chilly, a fire should be built in the stall.

[15] “As some horses are fitted for military service, others for hauling, others for breeding, and others for racing, all are not to be judged and valued by the same standards. Thus the experienced soldier chooses his horses by one standard and feeds and trains them in one way, and the charioteer and circus-rider in another; and the trainer who is breaking horses for riding under the saddle or for the carriage does not use the same system as the man who has military service in view; for as on the one hand, in the army, they want spirited horses, so on the other hand they prefer more docile ones for road service. It is for this reason that there has grown up the greatest difference in the matter of castrating horses; for when the testicles have been removed they become more steady for the reason that they no longer have seed. Such horses are called geldings, just as castrated boars are called barrows, and castrated cocks are called capons. [16] In the matter of treatment there are, in the case of horses, a great many symptoms of disease and methods of treatment, and the head groom should have these written out. It is for this reason that in Greece those who treat cattle in general are called by the special name *ἵππιατροί*, ‘horse-doctors.’”

Cum haec loqueremur, venit a Menate libertus, qui dicat liba absoluta esse et rem divinam paratam; si vellent, venirent illuc et ipsi pro se sacrificarentur. Ego vero, inquam, vos ante ire non patiar, antequam mihi reddideritis tertium actum de mulis, de canibus, de pastoribus. Brevis oratio de istis, inquit Murrius. Nam muli et item hinni bigeneri atque insiticii, non suo apte genere ab radicibus. Ex equa enim et asino fit mulus, contra ex equo et asina hinnus. Uterque eorum ad usum utilis, partu fructus neuter. Pullum asininum a partu recentem subiciunt equae, cuius lacte ampliore fiunt, quod id lacte quam asininum ad alimonia dicunt esse melius. Praeterea educant eum paleis, faeno, hordeo. Matri suppositiciae quoque inserviunt, quo equa ministerium lactis cibum pullo praebere possit. Hic ita eductus a trimo potest admitti; neque enim aspernatur propter consuetudinem equinam. Hunc minorem si admiseris, et ipse citius senescit, et quae ex eo concipiuntur fiunt deteriora. Qui non habent eum asinum, quem supposuerunt equae, et asinum admissarium habere volunt, de asinis quem amplissimum formosissimumque possunt eligunt, quique seminio natus sit bono, Arcadico, ut antiqui dicebant, ut nos experti sumus, Reatino, ubi tricenis ac quadragenis milibus admissarii aliquot venierunt. Quos emimus item ut equos stipulamurque in emendo ac facimus in accipiendo idem, quod dictum est in equis. Hos pascimus praecipue faeno atque hordeo, et id ante admissuram et largius facimus, ut cibo suffundamus vires ad feturam, eodem tempore quo equos adducentes, itemque ut ineat equas per origas curamus. Cum peperit equa mulum aut mulam, nutricantes educamus. Hi si in palustribus locis atque uliginosis nati, habent ungulas molles; idem si exacti sunt aestivo tempore in montes, quod fit in agro Reatino, durissimis ungulis fiunt. In grege mulorum parando spectanda aetas et forma, alterum, ut in vecturis sufferre labores possint; alterum, ut oculos aspectu delectare queant. Hisce enim binis coniunctis omnia vehicula in viis ducuntur. Haec me Reatino auctore probares, mihi inquit, nisi tu ipse domi equarum greges haberes ac mulorum greges vendidisses. Hinnus qui appellatur, est ex equo et asina, minor quam mulus corpore, plerumque rubicundior, auribus ut equinis, iubam et caudam habet similem asini. Item in ventre est, ut equus, menses duodecim. Hosce item ut eculos et educant et alunt et aetatem eorum ex dentibus cognoscunt.

[8.1] While we were thus speaking a freedman comes from Menates to tell us that the cakes had been offered and the sacrifice was made ready; if the gentlemen wished they might come there and perform their sacrifices for themselves. "But," I said, "I shan't let you go until you have played out the third act — on mules, dogs, and herdsmen." "It will take only a short time to discuss them," said Murrius; "for mules and hinnies are hybrids and grafts, not from roots after their own kind; for the mule is the offspring of a mare and an ass, while the hinny is the offspring of a horse and a jenny; [2] each is useful work, but neither brings any return from young. When an ass colt is newly

born it is placed under a mare and becomes fatter on her milk, as they claim that such nourishment is more nutritious than the ass's milk. They are reared, in addition, on straw, hay, or barley. Special care is also taken of the foster-mother, so the mare may furnish the colt with an abundant supply of milk. A jack so reared may be used for breeding after three years, and because it is accustomed to horses it will not refuse to mate. [3] If you use him at an early age, he himself tires sooner, and his offspring will be of poorer quality. Those who do not have such a jack, reared on mare's milk, but want a breeding jack, pick one as heavy and handsome as they can find and of good breed — of the Arcadian breed, our ancestors used to say, but of Reatine breed, as we have found by experience; in that district several breeding asses have sold for three hundred and even four hundred thousand sesterces. In purchasing we observe the same rules as in the case of horses, and make the same stipulations in the matter of purchase and acceptance as were named in the case of horses. [4] We feed these chiefly on hay and barley and increase the amount before breeding, so that we may furnish strength from the food for begetting; and we mate them at the same season in which we mate horses, and we are careful also to have them cover the mares with the help of a groom. When a mare drops a horse-mule or a mare-mule we rear it at the teat. [5] If these are born in swampy or damp ground they have soft hoofs; but if they are driven into the mountains in summer, as is done in the district of Reate, their hoofs grow quite hard. In assembling a herd of mules both age and build must be watched — the former that they may be strong enough to bear the labour of hauling, and the latter that they may please the eyes with the appearance; for it is by pairs of these animals that all vehicles are drawn on the roads. [6] You would take my word for this as being an expert from Reate," he remarked to me, "if you did not keep herds of mares at home yourself, and had not sold herds of mules. The so-called hinny is the offspring of a horse and a jenny; smaller than the mule, usually rather redder, with ears like a horse's, but with mane and tail like those of the ass. These are reared and fed just as young horses are, and their age is determined by the teeth."

IX.

Relinquitur, inquit Atticus, de quadripedibus quod ad canes attinet, quod pertinet maxime ad nos, qui pecus pascimus lanare. Canes enim ita custos pecoris eius quod eo comite indiget ad se defendendum. In quo genere sunt maxime oves, deinde caprae. Has enim lupus captare solet, cui opponimus canes defensores. In suillo pecore tamen sunt quae se vindicent, verres, maiales, scrofae. Prope enim haec apris, qui in silvis saepe dentibus canes occiderunt. Quid dicam de pecore maiore? Cum sciam mulorum gregem, cum pasceretur et eo venisset lupus, ultro mulos circumfluxisse et ungulis caedendo eum occidissee, et tauros solere diversos adsistere clunibus continuatos et cornibus facile propulsare lupos. Quare de canibus quoniam genera duo, unum venaticum et pertinet ad feras bestias silvestres, alterum

quod custodiae causa paratur et pertinet ad pastorem, dicam de eo ad formam artis expositam in novem partes.

Primum aetate idonea parandi, quod catuli et vetuli neque sibi neque ovibus sunt praesidio et feris bestiis non numquam praedae. Facie debent esse formosi, magnitudine ampla, oculis nigrantibus aut ravis, naribus congruentibus, labris subnigris aut rubicundis neque resimis superioribus nec pendulis subtus, mento suppresso et ex eo enatis duobus dentibus dextra et sinistra paulo eminulis, superioribus directis potius quam brocchis, acutos quos habeant labro tectos, capitibus et auriculis magnis ac flaccis, crassis cervicibus ac collo, internodiis articularum longis, cruribus rectis et potius varis quam vatiis, pedibus magnis et latis, qui ingredienti ei displodantur, digitis discretis, unguibus duris ac curvis, solo ne ut corneo ne nimium duro, sed ut fermentato ac molli; a feminibus summis corpore suppresso, spina neque eminula neque curva, cauda crassa; latrato gravi, hiatu magno, colore potissimum albo, quod in tenebris facilius agnoscuntur, specie leonina. Praeterea feminas volunt esse mammosas aequalibus papillis. Item videndum ut boni seminii sint; itaque et a regionibus appellantur Lacones, Epirotici, Sallentini. Videndum ne a venatoribus aut laniis canes emas; alteri quod ad pecus sequendum inertes, alteri, si viderint leporem aut cervum, quod eum potius quam oves sequentur. Quare a pastoribus empti melior, quae oves sequi consuevit, aut sine ulla consuetudine quae fuerit. Canis enim facilius quid adsuescit, eaque consuetudo firmior, quae fit ad pastores, quam quae ad pecudes. Publius Aufidius Pontianus Amiterninus cum greges ovium emisset in Umbria ultima, quibus gregibus sine pastoribus canes accessissent, pastores ut deducerent in Metapontinos saltus et Heracleae emporium, inde cum domum redissent qui ad locum deduxerant, e desiderio hominum diebus paucis postea canes sua sponte, cum dierum multorum via interesset, sibi ex agris cibaria praebuerunt atque in Umbriam ad pastores redierunt. Neque eorum quisquam fecerat, quod in agri cultura Saserna praecepit: qui vellet se a cane sectari, ut ranam obiciat coctam. Magni interest ex semine esse canes eodem, quod cognati maxime inter se sunt praesidio. Sequitur quartum de emptione: fit alterius, cum a priore domino secundo traditus est. De sanitate et noxa stipulationes fiunt eadem, quae in pecore, nisi quod hic utiliter exceptum est: alii pretium faciunt in singula capita canum, alii ut catuli sequantur matrem, alii ut bini catuli unius canis numerum obtineant, ut solent bini agni ovis, plerique ut accedant canes, qui consuerunt esse una.

Cibatus canis propior hominis quam ovis. Pascitur enim eduliis et ossibus, non herbis aut fronde. Diligenter ut habeat cibaria providendum. Fames enim hos ad quaerendum cibum ducet, si non praebetur, et a pecore abducat; nisi si, ut quidam putant, etiam illuc pervenerint, proverbium ut tollant anticum vel etiam ut mython aperiant de Actaeone atque in dominum adferant dentes. Nec non ita panem hordeaceum dandum, ut non potius eum in lacte des intritum, quod eo consueti cibo uti a pecore non cito desciscunt. Morticinae ovis non

patiuntur vesci carne, ne ducti sapore minus se abstineant. Dant etiam ius ex ossibus et ea ipsa ossa contusa. Dentes enim facit firmiores et os magis patulum, propterea quod vehementius diducuntur malae, acrioresque fiunt propter medullarum saporem. Cibum capere consuescunt interdiu, ubi pascuntur, vesperi, ubi stabulantur. Feturae principium admittendi faciunt veris principio; tum enim dicuntur catulire, id est ostendere velle se maritari. Quae tum admissae, pariunt circiter solstitium; praegnantem enim solent esse ternos menses. In fetura dandum potius hordeaceos quam triticeos panes; magis enim eo aluntur et lactis praebent maiorem facultatem. In nutricatu secundum partum, si plures sunt, statim eligere oportet quos habere velis, reliquos abicere. Quam paucissimos reliqueris, tam optimi in alendo fiunt propter copiam lactis. Substernitur eis acus aut quid item aliud, quod molliore cubili facilius educuntur. Catuli diebus XX videre incipiunt. Duobus mensibus primis a partu non diiunguntur a matre, sed minutatim desuefiunt. Educunt eos plures in unum locum et iritant ad pugnandum, quo fiunt acriores, neque defatigari patiuntur, quo fiunt segniores. Consue quoque faciunt ut alligari possint primum levibus vinclis; quae si abrodere conantur, ne id consuescant facere, verberibus eos deterrere solent. Pluviis diebus cubilia substernenda fronde aut pabulo duabus de causis: ut ne oblinantur aut perfrigescant. Quidam eos castrant, quod eo minus putant relinquere gregem; quidam non faciunt, quod eos credunt minus acres fieri. Quidam nucibus Graecis in aqua tritis perungunt aures et inter digitos, quod muscae et ricini et pulices soleant, si hoc unguine non sis usus, ea exulcerare. Ne vulnerentur a bestiis, imponuntur his collaria, quae vocantur melium, id est cingulum circum collum ex corio firmo cum clavulis capitatis, quae intra capita insuitur pellis mollis, ne noceat collo duritia ferri; quod, si lupus aliusve quis his vulneratus est, reliquas quoque canes facit, quae id non habent, ut sint in tuto. Numerus canum pro pecoris multitudine solet parari; fere modicum esse putant, ut singuli sequantur singulos opiliones. De quo numero alius alium modum constituit, quod, si sunt regiones, ubi bestiae sint multae, debent esse plures, quod accidit his qui per calles silvestres longinquos solent comitari in aestiva et hiberna. Villatico vero gregi in fundum satis esse duo, et id marem et feminam. Ita enim sunt adsiduiiores, quod cum altero item alter fit acrior, et si alteruter aeger est, ne sine cane grex sit.

[9.1] "There is left," said Atticus, "of the discussion of quadrupeds only the topic of dogs; but it is of great interest to those of us who keep fleece-bearing flocks, the dog being the guardian of the flock, which needs such a champion to defend it. Under this head come especially sheep but also goats, as these are the common prey of the wolf, and we use dogs to protect them. In a herd of swine, however, there are some members which can defend themselves, namely, boars, barrows, and sows; for they are very much like wild boars, which have often killed dogs in the forest with their tusks. [2] And why speak about the larger animals? For I know that while a herd of mules was feeding and a wolf came upon them, the animals actually whirled about and kicked

him to death; that bulls often stand facing different ways, with their hind-quarters touching, and easily drive off wolves with their horns. As there are, then, two sorts of dogs — the hunting-dog suited to chase the beasts of the forest, and the other which is procured as a watch-dog and is of importance to the shepherd — I shall speak of the latter under nine divisions, according to the scientific division which has been set forth.

[3] “In the first place, they should be procured of the proper age, as puppies and dogs over age are of no value for guarding either themselves or sheep, and sometimes fall a prey to wild beasts. They should be comely of face, of good size, with eyes either darkish or yellowish, symmetrical nostrils, lips blackish or reddish, the upper lip neither raised too high nor drooping low, stubby jaw with two fangs projecting somewhat from it on the right and left, the upper straight rather than curved, [4] their sharp teeth covered by the lip, large head, large and drooping ears, thick shoulders and neck, the thighs and shanks long, legs straight and rather bowed in than out, large, wide paws which spread as he walks, the toes separated, the claws hard and curving, the sole of the foot not horny or too hard, but rather spongy, as it were, and soft; with the body tapering at the top of the thigh, the backbone neither projecting nor swayed, tail thick; with a deep bark, wide gape, preferably white in colour, so that they may the more readily be distinguished in the dark; and of a leonine appearance. [5] Bitches, in addition, should have well formed dugs with teats of equal size. Care should also be taken that they be of good breed; accordingly they receive their names from the districts from which they come: Spartans, Epirotes, Sallentines. You should be careful not to buy dogs from huntsmen or butchers — in the latter case because they are too sluggish to follow the flock, and in the other because if they see a hare or a stag they will follow it rather than the sheep. It is better, therefore, to buy from a shepherd a bitch which has been trained to follow sheep, or one that has had no training at all; for a dog forms a habit for anything very easily, and the attachment he forms for shepherds is more lasting than that he forms for sheep. [6] Publius Aufidius Pontianus, of Amiternum, had bought some herds of sheep in furthest Umbria, the purchase including the dogs but not the shepherds, but providing that the shepherds should take them to the pastures of Metapontum and to market at Heraclea. When the men who had taken them there had returned home, the dogs, without direction and simply from their longing for their masters, returned to the shepherds in Umbria a few days later, though it was a journey of many days, having lived off the country. And yet not one of those shepherds had done what Saserna, in his book on agriculture, directed: that a man who wanted a dog to follow him should throw him a boiled frog! It is very important that the dogs be all of the same family, as those which are related are the greatest protection to one another. [7] The fourth point is that of purchase: possession passes when the dog is delivered by the former owner to the next. With regard to health and liability to damage, the same precautions are taken as in the case of sheep, except that it is advisable to make the

following stipulation: some people fix the price of dogs per head, others stipulate that pups go with their mother, others that two pups count as one dog just as usually two lambs count as one sheep, and many that dogs be included which have become accustomed to being together.

[8] “The food of dogs is more like that of man than that of sheep: they eat scraps of meat and bones, not grass and leaves. Great care must be taken for their supply of food; for hunger will drive them to hunt for food, if it is not provided, and take them away from the flock — [9] even if they do not, as some think, come to the point of disproving the ancient proverb, or even go so far as to enact the story of Actaeon, and sink their teeth in their master. [10] You should also feed them barley bread, but not without soaking it in milk; for when they have become accustomed to eating that kind of food they will not soon stray from the flock. They are not allowed to feed on the flesh of a dead sheep, for fear that the taste will make them less inclined to spare the flock. They are also fed on bone soup and even broken bones as well; for these make their teeth stronger and their mouths of wider stretch, because their jaws are spread with greater force, and the savour of the marrow makes them more keen. Their habit is to eat during the day when they are out with the flocks, and at evening when these are folded. [11] The beginning of breeding is fixed at the opening of spring, for at that time they are said to be ‘in heat,’ that is, to show their desire for mating. Those that conceive at that time have a litter about the time of the summer solstice, for they usually carry their young for three months. During the period of gestation they should be fed barley bread rather than wheat bread, for they are better nourished on the former and yield a larger supply of milk. [12] In the matter of rearing after birth, if the litter is large you should at once pick those that you wish to keep and dispose of the others. The fewer you leave the better they will grow, because of the abundance of milk. Chaff and other like stuff is spread under them, because they are more easily reared on a soft bedding. The pups open their eyes within twenty days; for the first two months after birth they are not taken from the mother, but are weaned by degrees. Several of them are driven into one place and teased to make them fight, so as to make them more keen; but they are not allowed to tire themselves out, as this makes them sluggish. [13] They are also accustomed to being tied, at first with slight leashes; and if they try to gnaw these they are whipped to keep them from forming the habit of doing this. On rainy days the kennels should be bedded with leaves or fodder, and this for two purposes: to keep them from being muddled, and to keep them from getting chilled. [14] Some people castrate them, because they think that by this means they are less likely to leave the flock; others do not, because they think this makes them less keen. Some people crush filberts in water and rub the mixture over their ears and between their toes, as the flies and worms and fleas make ulcers there if you do not use this ointment. [15] To protect them from being wounded by wild beasts, collars are placed on them — the so-called melium, that is, a belt around the neck made of stout leather with nails

having heads; under the nail heads there is sewed a piece of soft leather, to prevent the hard iron from injuring the neck. The reason for this is that if a wolf or other beast has been wounded by these nails, this makes the other dogs also, which do not have the collar, safe. [16] The number of dogs is usually determined by the size of the flock; it is thought to be about right for one dog to follow each shepherd. But the number varies with the circumstances; thus in countries where wild beasts are plentiful there should be more, as is usually the case with those who escort the flocks to summer and winter pastures through distant woodland trails. On the other hand, for a flock feeding near the steading two dogs to the farm are sufficient. These should be a male and a female, for in this case they are more watchful, as one makes the other more keen, and if one of the two is sick that the flock may not be without a dog."

X.

Cum circumspiceret, nequid praeterisset, Hoc silentium, inquam, vocat alium ad partes. Relicum enim in hoc actu, quot et quod genus sint habendi pastores. Cossinius: Ad maiores pecudes aetate superiores, ad minores etiam pueros, utrosque horum firmiores qui in callibus versentur, quam eos qui in fundo cotidie ad villam redeant (itaque in saltibus licet videre iuventutem, et eam fere armatam, cum in fundis non modo pueri sed etiam puellae pascant). Qui pascunt, eos cogere oportet in pastione diem totum esse, pascere communiter, contra pernoctare ad suum quemque gregem, esse omnes sub uno magistro pecoris; eum esse maiorem natu potius quam alios et peritiorem quam reliquos, quod ei qui aetate et scientia praestat animo aequiore reliqui parent. Ita tamen oportet aetate praestare, ut ne propter senectutem minus sustinere possit labores. Neque enim senes neque pueri callium difficultatem ac montium arduitatem atque asperitatem facile ferunt, quod patiendum illis, qui greges secuntur, praesertim armenticios ac caprinos, quibus rupes ac silvae ad pabulandum cordi. Formae hominum legendae ut sint firmae ac veloces, mobiles, expeditis membris, qui non solum pecus sequi possint, sed etiam a bestiis ac praedonibus defendere, qui onera extollere in iumenta possint, qui excurrere, qui iaculari. Non omnis apta natio ad pecuariam, quod neque Bastulus neque Turdulus idonei, Galli appositissimi, maxime ad iumenta. In emptionibus dominum legitimum sex fere res perficiunt: si hereditatem iustam adiit; si, ut debuit, mancipio ab eo accepit, a quo iure civili potuit; aut si in iure cessit, qui potuit cedere, et id ubi oportuit; aut si usu cepit; aut si e praeda sub corona emit; tumve cum in bonis sectione cuius publice veniit. In horum emptione solet accedere peculium aut excipi et stipulatio intercedere, sanum esse, furtis noxisque solutum; aut, si mancipio non datur, dupla promitti, aut, si ita pacti, simpla. Cibus eorum debet esse interdus separatim unius cuiusque gregis, vespertinus in cena, qui sunt sub uno magistro, communis. Magistrum providere oportet ut omnia sequantur instrumenta, quae pecori et pastoribus opus sunt, maxime ad victum hominum et ad

medicinam pecudum. Ad quam rem habent iumenta dossuaria domini, alii equas, alii pro iis quid aliud, quod onus dorso ferre possit.

Quod ad feturam humanam pertinet pastorum, qui in fundo perpetuo manent, facile est, quod habent conservam in villa, nec hac venus pastoralis longius quid quaerit. Qui autem in saltibus et silvestribus locis pascunt et non villa, sed casis repentinis imbres vitant, iis mulieres adiungere, quae sequantur greges ac cibaria pastoribus expediant eosque assiduiore faciant, utile arbitrati multi. Sed eas mulieres esse oportet firmas, non turpes, quae in opere multis regionibus non cedunt viris, ut in Illyrico passim videre licet, quod vel pascere pecus vel ad focum afferre ligna ac cibum coquere vel ad casas instrumentum servare possunt. De nutricatu hoc dico, easdem fere et nutrices et matres. Simul aspicit ad me et, ut te audii dicere, inquit, cum in Liburniam venisses, te vidisse matres familias eorum afferre ligna et simul pueros, quos alerent, alias singulos, alias binos, quae ostenderunt fetas nostras, quae in conopiis iacent dies aliquot, esse eiuncidas ac contemnendas. Cui ego, Certe, inquam; nam in Illyrico hoc amplius, praegnatem saepe, cum venit pariendi tempus, non longe ab opere discedere ibique enixam puerum referre, quem non peperisse, sed invenisse putes; nec non etiam hoc, quas virgines ibi appellant, non numquam annorum viginti, quibus mos eorum non denegavit, ante nuptias ut succumberent quibus vellent et incommitatis ut vagari liceret et filios habere. Quae ad valitudinem pertinent hominum ac pecoris et sine medico curari possunt, magistrum scripta habere oportet. Is enim sine litteris idoneus non est, quod rationes dominicas pecuarias conficere nequiquam recte potest. De numero pastorum alii angustius, alii laxius constituere solent. Ego in octogenas hirtas oves singulos pastores constitui, Atticus in centenas. Greges ovium si magni sunt, quos miliarios faciunt quidam, facilius de summa hominum detrudere possis, quam de minoribus, ut sunt et Attici et mei. Septingenarii enim mei; tu, opinor, octingenarios habuisti, nec tamen non, ut nos, arietum decumam partem. Ad equarum gregem quinquagenarium bini homines, utique uterque horum ut secum habeat equas domitas singulas in his regionibus, in quibus in stabula solent equas abigere, ut in Apulia et in Lucanis accidit saepe.

[10.1] As he glanced around to see if he had overlooked anything, I remarked: "Your silence gives the cue to another actor; for the remaining scene in this act concerns the number and kind of herdsmen to be kept." Whereupon Cossinius: "For herds of larger cattle older men, for the smaller even boys; but in both cases those who range the trails should be sturdier than those on the farm who go back to the steading every day. Thus on the range you may see young men, usually armed, while on the farm not only boys but even girls tend the flocks. [2] The herdsmen should be required to stay on the range the entire day and have the herds feed together; but, on the other hand, to spend the night each with his own herd. They should all be under one herd-master; he should preferably be older than the rest and more experienced, as the other

herdsmen will be more disposed to take orders from one who surpasses them in both age and knowledge. [3] Still, he should not be so much older that his age will prevent him from being as able to stand hard work; for neither old men nor boys can easily endure the hardships of the trail and the steepness and roughness of the mountains — all of which must be encountered by those who follow the herd, and especially herds of cattle and oats, which like cliffs and woods for pasturage. The men chosen for this work should be of a sturdy sort, swift, nimble, with supple limbs; men who can not only follow the herd but can also protect it from beasts and robbers, who can lift loads to the backs of pack animals, who can dash out, and who can hurl the javelin. [4] It is not every people that is fitted for herding; thus neither a Bastulan nor a Turdulan is suited, while Gauls are admirably adapted, especially for draught cattle. In the matter of purchase there are some six methods of acquiring a legitimate title: by legal inheritance; by receiving, in due form, through mancipation from one who had a legal right to transfer; by legal cession, from one who had the right to cede, and that at the proper time; by right of possession; by purchase at auction from war-booty; and lastly by official sale among other property or in confiscated property. [5] In the purchase of slaves, it is customary for the peculium to go with the slave, unless it is expressly excepted; and for a guarantee to be given that he is sound and has not committed thefts or damage; or, if the transfer is not by mancipation, double the amount is guaranteed, or merely the purchase price, if this be agreed on. They should eat during the day apart, each with his own herd, but in the evening all those who are under one head-herdsman should eat together. The head-herdsman is to see that all equipment needed for the animals and herdsmen, and especially for sustenance of the men and the treatment of the cattle, shall accompany them; for which purpose owners keep pack animals, in some cases mares, in others any animal instead, which can carry a load on its back.

[6] “As to the breeding of herdsmen; it is a simple matter in the case of those who stay all the time on the farm, as they have a female fellow-slave in the steading, and the Venus of herdsmen looks no farther than this. But in the case of those who tend the herds in mountain valleys and wooded lands, and keep off the rains not by the roof of the steading but by makeshift huts, many have thought that it was advisable to send along women to follow the herds, prepare food for the herdsmen, and make them more diligent. [7] Such women should, however, be strong and not ill-looking. In many places they are not inferior to the men at work, as may be seen here and there in Illyricum, being able either to tend the herd, or carry firewood and cook the food, or to keep things in order in their huts. [8] As to feeding their young, I merely remark that in most cases they suckle them as well as bear them.” At the same time, turning to me, he said: “As I have heard you say that you, when you were in Liburnia, saw mothers carrying logs and children at the breast at the same time, sometimes one, sometimes two; showing that our newly-delivered

women, who lie for days under their mosquito-nets,^[9] "It is quite true," I replied; "and in Illyricum I have seen something even more remarkable: for it often happens there that a pregnant woman, when her time has come, steps aside a little way from her work, bears her child there, and brings it back so soon that you would say she had not borne it but found it. They have also another remarkable practice: their custom does not refuse to allow women, often as much as twenty years old (and they call them maidens, too), before marriage to mate with any man they please, to wander around by themselves, and to bear children." ^[10] (Cossinius resumes), "All directions for caring for the health of human beings and cattle, and all sicknesses which can be treated without the aid of a physician, the head-herdsman should keep in writing. For one who does not know his letters is not fit for the place, because he cannot possibly keep his master's cattle accounts correctly. The number of herdsmen is determined differently, some having a smaller, some a larger number. ^[11] My own practice is to have a herdsman to every eighty wool-bearing sheep, while Atticus has one to every hundred. If flocks of sheep are very large (and some people have as many as 1000) you can decrease the number of shepherds more easily than you can in smaller flocks, such as those of Atticus and mine. My own flocks contain 700, and yours, I think, had 800; but still you had one tenth of them rams, as I do. Two men are needed for a herd of fifty mares, and each of these should certainly have for his use a mare which has been broken to the saddle, in those districts where it is customary for the mares to be rounded up and driven to stalls, as is frequently true in Apulia and Lucania.

XI.

Quoniam promissa absolvimus, inquit, eamus. Si quidem, inquam, adieceritis de extraordinario pecudum fructu, ut praedictum est, de lacte in eo et tonsura. Lacte est omnium rerum, quas cibi causa capimus, liquentium maxime alibile, et id ovillum, dein caprinum. Quod autem maxime perpurget, est equinum, tum asininum, dein bubulum, tum caprinum. Sed horum sunt discrimina quaedam et a pastionibus et a pecudum natura et a mulgendo: a pastionibus, quod ad alendum utile quod fit ab hordeo et stipula et omnino arido et firmo cibo pecude pasta; ad perpurgandum ab ea, quae a viridi pasta, eo magis, si fuerit ex herbis, quae ipsae sumptae perpurgare solent corpora nostra; a pecudum natura, quod lac melius est a valentibus et ab his quae nondum veteres sunt, quam si est contra. A mulgendo atque ortu optimum est id quod neque nimium longe abest a mulso neque a partu continuo est sumptum. Ex hoc lacte casei qui fiunt, maximi cibi sunt bubuli et qui difficillime transeant sumpti, secundo ovilli, minimi cibi et qui facillime deiciantur caprini. Et etiam est discrimen, utrum casei molles ac recentes sint, an aridi et veteres, cum molles sint magis alibiles, in corpore non resides, veteres et aridi contra. Caseum facere incipiunt a vergiliis vernis exortis ad aestivas vergilias. Mulgent vere ad caseum faciendum mane, aliis temporibus meridianis horis, tametsi propter loca et pabulum disparile non usque quaque idem fit. In lactis

duos congios addunt coagulum magnitudine oleae, ut coeat, quod melius leporinum et haedinum quam agninum. Alii pro coagulo addunt de fici ramo lac et acetum, aspergunt item aliis aliquot rebus, quod Graeci appellant alii opon alii dakryon. Non negarim, inquam, ideo aput divae Ruminæ sacellum a pastoribus satam ficum, ibi enim solent sacrificari lacte pro vino et lactentibus. Mamma enim rumis, ut ante dicebant; a rumi etiam nunc dicuntur subrumi agni, lactantes a lacte. Quin aspergi solent sales, melior fossilis quam marinus.

De tonsura ovium primum animadverto, antequam incipiam facere, num scabiem aut ulcera habeant, ut, si opus est, ante curentur, quam tondeantur. Tonsurae tempus inter aequinoctium vernum et solstitium, cum sudare inceperunt oves, a quo sudore recens lana tonsa sucida appellata est. Tonsas recentes eodem die perungunt vino et oleo, non nemo admixta cera alba et adipe suilla; et si ea tecta solet esse, quam habuit pellem intectam, eam intrinsecus eadem re perinungunt et tegunt rursus. Siqua in tonsura plagam accepit, eum locum oblinunt pice liquida. Oves hirtas tondent circiter hordeaceam messem, in aliis locis ante faenisecia. Quidam has bis in anno tondent, ut in Hispania citeriore, ac semenstres faciunt tonsuras; duplicem impendunt operam, quod sic plus putant fieri lanae, quo nomine quidam bis secant prata. Diligentiores tegeticulis subiectis oves tondere solent, nequi flocci intereant. Dies ad eam rem sumuntur sereni, et iis id faciunt fere a quarta ad decimam; cum sole calidiore tonsa, ex sudore eius lana fit mollior et ponderosior et colore meliore. Quam demptam ac conglobatam alii vellera, alii vellimna appellant; ex quo vocabulo animadverti licet prius in lana vulsuram quam tonsuram inventam. Qui etiam nunc vellunt, ante triduo habent ieiunas, quod languidae minus aegre radices lanae retinent.

Omnino tonsores in Italiam primum venisse ex Sicilia dicuntur p. R. c. a. CCCCLIII, ut scriptum in publico Ardeae in litteris exstat, eosque adduxisse Publium Titinium Menam. Olim tonsores non fuisse adsignificant antiquorum statuae, quod pleraeque habent capillum et barbam magnam.

Suscipit Cossinius: Fructum ut ovis e lana ad vestimentum, sic capra e pilis ministrat ad usum nauticum et ad bellica tormenta et fabrilia vasa. Neque non quaedam nationes harum pellibus sunt vestitae, ut in Gaetulia et in Sardinia. Cuius usum aput anticos quoque Graecos fuisse apparet, quod in tragoediis senes ab hac pelle vocantur diphtheriae et in comoediis qui in rustico opere morantur, ut aput Caecilium in Hypobolimaéo habet adulescens, aput Terentium in Heautontimorumenó senex. Tondentur, quod magnis villis sunt, in magna parte Phrygiae; unde cilicia et cetera eius generis solent fieri. Sed quod primum ea tonsura in Cilicia sit instituta, nomen id Cilicas adiecisse dicunt.

Illi hoc, neque ab hoc quod mutaret Cossinius. Et simul Vituli libertus in urbem ueniens ex hortis devertitur ad nos et, Ego ad te missus, inquit, ibam

domum rogatum ne diem festum faceres breviorē et mature venires. Itaque discedimus ego et Scrofa in hortos ad Vitulum, Niger Turrani noster, illi partim domum, partim ad Menatem.

[11.1] “As we have completed what we promised,” he said, “let us leave.” “Yes,” said I, “but not until you have added, as was promised, something about supplementary profit from the flock, including under it the milk and the shearing.” (Cossinius continues) “Of all the liquids which we take for sustenance, milk is the most nourishing — first sheep’s milk, and next goat’s milk. Mare’s milk, however, has the greatest purgative effect, secondly ass’s milk, then cow’s milk, and lastly goat’s milk. [2] But there are certain differences among these which arise from a difference of pasturage, a difference in the nature of the animal, and a difference in the milking. As affected by pasturage, milk is best for nourishment which comes from animals fed on barley and straw, and, in general, on solid dry food; while that from animals fed on green food is best for purging, and especially if the green food such as purges us when we eat it ourselves. As affected by the nature of the animal, milk from healthy animals and those not yet old is better than if it is the reverse. As affected by milking and birth, the best milk is that which has not been kept too long after milking and which has not been milked immediately after parturition. [3] Of the cheeses which are made from this milk, those made of cow’s milk have the most nutriment, but when eaten are discharged with most difficulty; next come those made of sheep’s milk, while those made of goat’s milk have the least nutriment and are most easily voided. There is also a difference depending on whether the cheeses are soft and fresh or dry and old, as the soft cheeses are more nutritious and less constipating, while the old, dry cheeses are just the opposite. [4] The period for making cheese extends from the rising of the Pleiades in spring until the Pleiades in summer. In spring the milk for cheese making is drawn in the morning, while at other seasons the milking takes place toward midday; but the practice is not entirely uniform because of differences in locality and food. To two congii of milk is added a bit of rennet the size of an olive, to make it coagulate; this is better when made from a hare or a kid than when made from a lamb. Others use, instead of rennet, the milk from the stem of a fig, and vinegar; they also curdle with various other substances — a thing which, in Greek, is sometimes called ὀρός, and sometimes δάκρυον.” [5] “I should not be surprised,” I remarked, “if that is the reason that a fig tree was planted by shepherds near the shrine of the goddess Rumina; you know at that place sacrifice is offered with milk instead of with wine and sucklings. For people used to call the udder rumis, and even to-day we have lambs called subrumi from this word, just as they are called lactantes (sucklings) from lac (milk). Those who sprinkle salt prefer mineral salt to sea salt.

[6] “As to the shearing of sheep, I first am careful to see, before beginning it, whether the sheep have the scab or sores, so that they may be treated if

necessary before being sheared. The proper time for shearing is the period from the spring equinox to the solstice, after the sheep have begun to sweat; it is because of this sweat (*sudor*) that freshly shorn wool is called ‘juicy’ (*sucida*). [7] Freshly clipped sheep are rubbed down on the same day with wine and oil, to which some add a mixture of white chalk and hog lard; and if they have been accustomed to wear a jacket, the skin with which they were covered is greased on the inside with the same mixture and placed on them again. If a sheep has been cut during the shearing, the wound is smeared with soft pitch. Sheep with coarse fleece are shorn about the time of the barley harvest, or at other places before the cutting of the hay. [8] Some shear their sheep twice a year, as is done in Hither Spain, shearing every six months. They undergo the double work on the supposition that more wool is secured by this method — which is the same motive that leads some to mow their meadows twice a year. The more careful farmers spread out cloths and shear the sheep over them to prevent loss of the wool. [9] Calm days are chosen for this work, and on these the shearing is done from about the fourth to the ninth hour. The fleece from a sheep that is clipped when the sun is rather warm is rendered softer by the sweat, as well as heavier and of better colour. When the fleece has been removed and rolled up it is called by some *vellus*, by others *vellimnum*; and it may be seen from these words that in the case of wool, plucking was discovered earlier than shearing. Some people pluck the wool even to-day; and these keep the sheep without food for three days before, as the roots of the wool hold less tightly when the sheep are weak.”

[10] “In fact, it is claimed that barbers first came to Italy from Sicily 453 years after the founding of the city of Rome (as is recorded still on a public monument at Ardea), and that they were introduced by Publius Titinius Mena. That there were no barbers in early days is evident from the statues of the ancients, many of which have long hair and a large beard.”

[11] Cossinius resumed: “As the sheep affords a profit from its wool to be used for clothing, so the goat from her hair is of service for nautical purposes, as well as for military engines and for workmen’s equipment. Some barbarous people, too, use their skins for clothing, as, for instance, in Gaetulia and Sardinia. That this usage obtained among the ancient Greeks also is evident from the fact that the old men who appear in the tragedies get their name of *diphtheriae* from the goat skin, and in comedies those who are engaged in rustic labour, such as the young man in Caecilius’s *Hypobolimaecus*, and the old man in Terence’s *Heautontimorumenos*. [12] Because they have long hair, goats are clipped over a large part of Phrygia; and it is from this that hair-cloth (*cilicia*) and other fabrics of the kind are made. But it is said that the Cilicians gave the name to it from the fact that this clipping was first practised in Cilicia.”

This was their contribution, and Cossinius found nothing to alter in it. At the

same time a freedman of Vitulus, on his way to the city from the park, turned aside to us and said: "I was sent to you, and was on my way to your house to ask you not to make the holiday shorter but to come early." And so Scrofa and I set out to Vitulus's place, and the others, my dear Turranius Niger, some for their homes and some to Menates.

BOOK III

I.

Cum duae vitae traditae sint hominum, rustica et urbana, quidni, Pinni, dubium non est quin hae non solum loco discretae sint, sed etiam tempore diversam originem habeant. Antiquior enim multo rustica, quod fuit tempus, cum rura colerent homines neque urbem haberent. Etenim vetustissimum oppidum cum sit traditum Graecum Boeotiae Thebae, quod rex Ogyges aedificarit, in agro Romano Roma, quam Romulus rex; nam in hoc nunc denique est ut dici possit, non cum Ennius scripsit:

septingenti sunt paulo plus aut minus anni,
augusto augurio postquam inclita condita Roma est.

[1.1] Though there are traditionally two ways in which men live — one in the country, the other in the city — there is clearly no doubt, Pinnius, that these differ not merely in the matter of place but also in the time at which each had its beginning. Country life is much more ancient — I mean the time when people lived on the land and had no cities. [2] For tradition has it that the oldest of all cities is a Greek one, Thebes in Boeotia, founded by King Ogygus; while the oldest on Roman territory is Rome, founded by King Romulus. For we may now say, with regard to this, with more accuracy than when Ennius wrote:

Seven hundred years are there, a little more or less,
Since glorious Rome was founded, with augury august.”

Thebae, quae ante cataclysmum Ogygi conditae dicuntur, eae tamen circiter duo milia annorum et centum sunt. Quod tempus si referas ad illud principium, quo agri coli sunt coepti atque in casis et tuguriis habitabant nec murus et porta quid esset sciebant, immani numero annorum urbanos agricolae praestant. Nec mirum, quod divina natura dedit agros, ars humana aedificavit urbes, cum artes omnes dicantur in Graecia intra mille annorum reperte, agri numquam non fuerint in terris qui coli possint. Neque solum antiquior cultura agri, sed etiam melior. Itaque non sine causa maiores nostri ex urbe in agros redigebant suos cives, quod et in pace a rusticis Romanis alebantur et in bello ab his allevabantur. Nec sine causa terram eandem appellabant matrem et Cererem, et qui eam colerent, piam et utilem agere vitam credebant atque eos solos reliquos esse ex stirpe Saturni regis. Cui consentaneum est, quod initia vocantur potissimum ea quae Cereri fiunt sacra. Nec minus oppidi quoque nomen Thebae indicat antiquiorem esse agrum, quod ab agri genere, non a conditore nomen ei est impositum. Nam lingua prisca et in Graecia Aeolis Boeoti sine afflatu vocant collis tebas, et in Sabinis, quo e Graecia venerunt Pelasgi, etiam nunc ita dicunt, cuius

vestigium in agro Sabino via Salaria non longe a Reate miliarius clivus cum appellatur tebae. Agri culturam primo propter paupertatem maxime indiscretam habebant, quod a pastoribus qui erant orti in eodem agro et serebant et pascebant; quae postea creverunt peculia diviserunt, ac factum ut dicerentur alii agricolae, alii pastores. Quae ipsa pars duplex est, tametsi ab nullo satis discreta, quod altera est villatica pastio, altera agrestis. Haec nota et nobilis, quod et pecuaria appellatur, et multum homines locupletes ob eam rem aut conductos aut emptos habent saltus; altera villatica, quod humilis videtur, a quibusdam adiecta ad agri culturam, cum esset pastio, neque explicata tota separatim, quod sicam, ab ullo. Itaque cum putarem esse rerum rusticarum, quae constituta sunt fructus causa, tria genera, unum de agri cultura, alterum de re pecuaria, tertium de villaticis pastionibus, tres libros institui, e quis duo scripsi, primum ad Fundaniam uxorem de agri cultura, secundum de pecuaria ad Turranium Nigrum; qui reliquus est tertius de villaticis fructibus, in hoc ad te mitto, quod visus sum debere pro nostra vicinitate et amore scribere potissimum ad te. Cum enim villam haberes opere tectorio et intestino ac pavementis nobilibus lithostrotis spectandam et parum putasses esse, ni tuis quoque litteris exornati parietes essent, ego quoque, quo ornatior ea esse posset fructu, quod facere possem, haec ad te misi, recordatus de ea re sermones, quos de villa perfecta habuissemus. De quibus exponendis initium capiam hinc.

[3] Thebes, however, which is said to have been founded before the deluge which takes its name from Ogygus, is some 2,100 years old. If, now, you compare this span of time with that early day when fields were first tilled, and men lived in huts and dugouts, and did not know what a wall or a gate was, farmers antedate city people by an enormous number of years. [4] And no marvel, since it was divine nature which gave us the country, and man's skill that built the cities; since all arts are said to have been discovered in Greece within a thousand years, while there never was a time when there were not fields on earth that could be tilled. And not only is the tilling of the fields more ancient — it is more noble. It was therefore not without reason that our ancestors tried to entice their citizens back from city to the country; for in time of peace they were fed by the country Romans, and in time of war aided by them. [5] It was also not without reason that they called the same earth "mother" and "Ceres," and thought that those who tilled her lived a pious and useful life, and that they were the only survivors of the stock of King Saturnus. And it is in accordance with this that the sacred rites in honour of Ceres are beyond all others called "Initiations." [6] The name of Thebes, too, no less clearly shows that the country is more ancient, in that the name given it comes from a type of land, and not from the name of the founder. For the old language, and the Aeolians of Boeotia in Greece as well, use the word teba for hill, leaving out the aspirate; and among the Sabines, a country which was settled by the Pelasgians from Greece, up to this day they use the same word; there is a trace of it in the Sabine country on the Via Salaria, not far

from Reate, where a slope of a mile in length is called *tebae*. [7] At first, because of their poverty, people practised agriculture, as a rule, without distinction, the descendants of the shepherds both planting and grazing on the same land; later, as this flocks grew, they made a division, with the result that some were called farmers, and others herdsmen. [8] This matter of herding has a twofold division (though no writer has made the distinction clearly), as the feeding around the *steading* is one thing, and that on the land is another. The latter is well known and highly esteemed, being also called *pecuaria*, and wealthy men frequently have ranches devoted to it, which they have either leased or bought; while the other, that of the *steading*, as it seems insignificant, has, by some writers, been brought under the head of agriculture, though it is a matter of feeding; and the subject as a whole has not, so far as I know, been treated as a separate topic by anyone. [9] Hence, as I suggested that there are three divisions of rural economy which are instituted for gainful ends — one of agriculture, a second of animal husbandry, and a third of the husbandry of the *steading* — I fixed on three books, of which I have written two: the first to my wife Fundania, on agriculture, and the second to Turranius Niger, on animal husbandry. The third book, that on the husbandry of the *steading*, which remains, I am herewith sending to you, thinking that in view of our nearness and our affection it is to you particularly that I should dedicate it. [10] For just as you had a villa noteworthy for its frescoing, inlaid work, and handsome mosaic floors, but thought it was not fine enough until its walls were adorned also by your writings, so I, that it might be farther adorned with fruit, so far as I could make it so, am sending this to you, recalling as I do the conversations which we held on the subject of the complete villa. And in discussing that subject we shall begin as follows.

II.

Comitiis aediliciis cum sole caldo ego et Q. Axius senator tribulis suffragium tulissemus et candidato, cui studebamus, vellemus esse praesto, cum domum rediret, Axius mihi, Dum diribentur, inquit, suffragia, vis potius villae publicae utamur umbra, quam privati candidati tabella dimidiata aedificemus nobis? Opinor, inquam, non solum, quod dicitur, “malum consilium consultori est pessimum”, sed etiam bonum consilium, qui consulit et qui consulitur, bonum habendum. Itaque imus, venimus in villam. Ibi Appium Claudium augurem sedentem invenimus in subselliis, ut consuli, siquid usus poposcisset, esset praesto. Sedebat ad sinistram ei Cornelius Merula consulari familia ortus et Fircellius Pavo Reatinus, ad dextram Minucius Pica et M. Petronius Passer. Ad quem cum accessissemus, Axius Appio subridens, Recipis nos, inquit, in tuum ornithona, ubi sedes inter aves? Ille, Ego vero, inquit, te praesertim, quoniam aues hospitales etiam nunc ructor, quas mihi apposuisti paucis ante diebus in Villa Reatina ad lacum Velini eunti de controversiis Interamnatium et Reatinorum. Sed non haec, inquit, villa, quam aedificarunt maiores nostri, frugalior ac melior est quam tua illa perpolita in Reatino? Nuncubi hic vides

citrum aut aurum? Num minium aut armenium? Num quod emblemata aut lithostrota? Quae illic omnia contra. Et cum haec sit communis universi populi, illa solius tua; haec quo succedant e campo cives et reliqui homines, illa quo equae et asini; praeterea cum ad rem publicam administrandam haec sit utilis, ubi cohortes ad dilectum consuli adductae consistant, ubi arma ostendant, ubi censores censu admittant populum. Tua scilicet, inquit Axius, haec in campo Martio extremo utilis et non deliciis sumptuosior quam omnes omnium universae Reatinae? Tua enim oblita tabulis pictis nec minus signis; at mea, vestigium ubi sit nullum Lysippi aut Antiphili, at crebra sartoris et pastoris. Et cum illa non sit sine fundo magno et eo polito cultura, tua ista neque agrum habeat ullum nec bovem nec equam. Denique quid tua habet simile villae illius, quam tuus avos ac proavos habebat? Nec enim, ut illa, faenisicia vidit arida in tabulato nec vindemiam in cella neque in granario messim. Nam quod extra urbem est aedificium, nihilo magis ideo est villa, quam eorum aedificia, qui habitant extra portam Flumentanam aut in Aemilianis.

[2.1] During the election of aediles, Quintus Axius, the senator, a member of my tribe, and I, after casting our ballots, wished, though the sun was hot, to be on hand to escort the candidate whom we were supporting when he returned home. Axius remarked to me: "While the votes are being sorted, shall we enjoy the shade of the Villa Publica, instead of building us one out of the half-plank of our own candidate?" "Well," I replied, "I think that the proverb is correct, 'bad advice is worst for the adviser,' and also that good advice should be considered good both for the adviser and the advised. [2] So we go our way and come to the Villa. There we find Appius Claudius, the augur, sitting on a bench so that he might be on hand for consultation, if need should arise. There were sitting at his left Cornelius Merula ('Blackbird'), member of a consular family, and Fircellius Pavo ('Peacock'), of Reate; and on his right Minucius Pica ('Magpie') and Marcus Petronius Passer ('Sparrow'). When we came up to him, Axius said to Appius, with a smile: "Will you let us come into your aviary, where you are sitting among the birds?" [3] "With pleasure," he replied, "and especially you; I still 'bring up' those hospitable birds which you set before me a few days ago in your villa at Reate, when I was on my way to lake Velinus in the matter of the dispute between the people of Interamna and those of Reate. But," he added, "isn't this villa, which our ancestors built, simpler and better than that elaborate villa of yours at Reate? [4] Do you see anywhere here citrus wood or gold, or vermilion or azure, or any coloured or mosaic work? At your place everything is just the opposite. Also, while this villa is common property of the whole population, that one belongs to you alone; this one is for citizens and other people to come to from the Campus, and that one is for mares and asses; and furthermore, this one is serviceable for the transaction of public business — for the cohorts to assemble when summoned by the consul for a levy, for the inspection of arms, for the censors to convoke the people for the census." [5] "Do you really mean, replied Axius,

“that this villa of yours on the edge of the Campus Martius is merely serviceable, and isn’t more lavish in luxuries than all the villas owned by everybody in the whole of Reate? Why, your villa is plastered with paintings, not to speak of statues; while mine, though there is no trace of Lysippus or Antiphilus, has many a trace of the hoer and the shepherd. Further, while that villa is not without its large farm, and one which has been kept clean by tillage, this one of yours has never a field or ox or mare. [6] In short, what has your villa that is like that villa which your grandfather and great-grandfather had? For it has never, as that one did, seen a cured hay harvest in the loft, or a vintage in the cellar, or a grain-harvest in the bins. For the fact that a building is outside the city no more makes it a villa than the same fact makes villas of the houses of those who live outside the Porta Flumentana or in the Aemiliana.”

Appius subridens, Quoniam ego ignoro, inquit, quid sit villa, velim me doceas, ne labar imprudentia, quod volo emere a M. Seio in Ostiensi villam. Quod si ea aedificia villae non sunt, quae asinum tuum, quem mihi quadraginta milibus emptum ostendebas apud te, non habent, metuo ne pro villa emam in litore Seianas aedes. Quod aedificium hic me Lucius Merula impulit ut cuperem habere, cum diceret nullam se accepisse villam, qua magis delectatus esset, cum apud eum dies aliquot fuisset; nec tamen ibi se vidisse tabulam pictam neque signum aheneum aut marmoreum ullum, nihilo magis torcula vasa vindemiatoria aut serias olearias aut trapetas. Axius aspicit Merulam et, Quid igitur, inquit, est ista villa, si nec urbana habet ornamenta neque rustica membra? Quoi ille; Num minus villa tua erit ad angulum Velini, quam neque pictor neque tector vidit umquam, quam in Rosea quae est polita opere tectorio eleganter, quam dominus habes communem cum asino? Cum significasset nutu nihilo minus esse villam eam quae esset simplex rustica, quam eam quae esset utrumque, et ea et urbana, et rogasset, quid ex iis rebus colligeret, Quid? inquit, si propter pastiones tuus fundus in Rosea probandus sit, et quod ibi pascitur pecus ac stabulatur, recte villa appellatur, haec quoque simili de causa debet vocari villa, in qua propter pastiones fructus capiuntur magni. Quid enim refert, utrum propter oves, an propter aves fructus capias? Anne dulcior est fructus apud te ex bubulo pecore, unde apes nascuntur, quam ex apibus, quae ad villam Sei in alvariis opus faciunt? Et num pluris tu e villa illic natos verres lanio vendis, quam hinc apros macellario Seius? Qui minus ego, inquit Axius, istas habere possum in Reatina villa? Nisi si apud Seium Siculum fit mel, Corsicum in Reatino; et hic aprum glans cum pascit empticia, facit pinguem, illic gratuita exilem. Appius: Posse ad te fieri, inquit, Seianas pastiones non negavit Merula; ego non esse ipse vidi. Duo enim genera cum sint pastionum, unum agreste, in quo pecuariae sunt, alterum villaticum, in quo sunt gallinae ac columbae et apes et cetera, quae in villa solent pasci, de quibus et Poenus Mago et Cassius Dionysius et alii quaedam separatim ac dispersim in libris reliquerunt, quae Seius legisse videtur et ideo ex iis pastionibus ex una villa maioris fructus capere, quam alii faciunt ex toto

fundo. Certe, inquit Merula; nam ibi vidi greges magnos anserum, gallinarum, columbarum, gruum, pavonum, nec non glirium, piscium, aprorum, ceterae venationis. Ex quibus rebus scriba librarius, libertus eius, qui apparuit Varroni et me absente patrono hospitio accipiebat, in annos singulos plus quinquagena milia e villa capere dicebat. Axio admiranti, Certe nosti, inquam, materterae meae fundum, in Sabinis qui est ad quartum vicesimum lapidem via Salaria a Roma. Quidni? inquit, ubi aestate diem meridie dividere soleam, cum eo Reate ex urbe aut, cum inde venio hieme, noctu ponere castra. Atque in hac villa qui est ornithon, ex eo uno quinque milia scio venisse turdorum denariis ternis, ut sexaginta milia ea pars reddiderit eo anno villae, bis tantum quam tuus fundus ducentum iugerum Reate reddit. Quid? sexaginta, inquit Axius, sexaginta, sexaginta? derides. Sexaginta, inquam. Sed ad hunc bolum ut pervenias, opus erit tibi aut epulum aut triumphus alicuius, ut tunc fuit Scipionis Metelli, aut collegiorum cenae, quae nunc innumerabiles excandefaciunt annonam macelli. Reliquis annis omnibus si non hanc expectabis summam, spero, non tibi decoquet ornithon; neque hoc accidit his moribus nisi raro ut decipiaris. Quotus quisque enim est annus, quo non videas epulum aut triumphum aut collegia non epulari? Sed propter luxuriam, inquit, quodam modo epulum cotidianum est intra ianuas Romae. Nonne item L. Abucius, homo, ut scitis, apprime doctus, cuius Luciliano caractere sunt libelli, dicebat in Albano fundum suum pastionibus semper vinci a villa? Agrum enim minus decem milia reddere, villam plus vicena. Idem secundum mare, quo loco vellet, si parasset villam, se supra centum milia e villa recepturum. Age, non M. Cato nuper, cum Luculli accepit tutelam, e piscinis eius quadraginta milibus sestertiis vendidit piscis? Axius, Merula mi, inquit, recipe me quaeso discipulum villaticae pastionis. Ille: Quin simul ac promiseris minerval, incipiam, inquit. Ego vero non recuso, vel hodie vel ex ista pastione crebro. Appius: Credo simul ac primum ex isto villatico pecore mortui erunt anseres aut pavones. Cui ille: Quid enim interest, utrum morticinas editis volucres an pisces, quos nisi mortuos estis numquam? Sed oro te, inquit, induce me in viam disciplinae villaticae pastionis ac vim formamque eius expone.

[7] To which Appius replied, with a smile: "As I don't know what a villa is, I should like you to enlighten me, so that I shall not go wrong from lack of foresight; since I want to buy a villa from Marcus Seius near Ostia. For if buildings are not villas unless they contain the ass which you showed me at your place, for which you paid 40,000 sesterces, I'm afraid I shall be buying a 'Seian' house instead of a seaside villa. [8] My friend here, Lucius Merula, made me eager to own this house when he told me, after spending several days with Seius, that he had never been entertained in a villa which he liked more; and this in spite of the fact that he saw there no picture or statue of bronze or marble, nor, on the other hand, apparatus for pressing wine, jars for olive oil, or mills." [9] Axius turned to Merula and asked: "How can that be a villa, if it has neither the furnishings of the city nor the appurtenances of the

country?" "Why," he replied, "you don't think that place of yours on the bend of the Velinus, which never a painter or fresco-worker has seen, is less a villa than the one in the Rosea which is adorned with all the art of the stucco-worker, and of which you and your ass are joint owners?" [10] When Axius had indicated by a nod that a building which was for farm use only was as much a villa as one that served both purposes, that of farm-house and city residence, and asked what inference he drew from that admission. "Why," he replied, "if your place in the Rosea is to be commended for its pasturage, and is rightly called a villa because cattle are fed and stabled there, for a like reason that also should have the name in which a large revenue is derived from pasturing. [11] For if you get a revenue from flocks, what does it matter whether they are flocks of sheep or of birds? Why, is the revenue sweeter on your place from oxen which give birth to bees than it is from the bees which are busy at their task in the hives of Seius's villa? And do you get more from the butcher for boars born on your place there than Seius does from the market-man for the wild boars from his place?" [12] "Well," replied Axius, "what is there to prevent me from keeping these at my villa at Reate? You don't think that honey is Sicilian if it is produced on Seius's place, and Corsican if it is produced at Reate? And that if mast which has to be bought feeds a boar on his place it makes him fat, while that which is had for nothing on my place makes him thin?" Whereupon Appius remarked: "Merula did not say that you could not have husbandry like Seius's on your place; but I have, with my own eyes, seen that you have not. [13] For there are two kinds of pasturing: one in the fields, which includes cattle-raising, and the other around the farmstead, which includes chickens, pigeons, bees, and the like, which usually feed in the stading; the Carthaginian Mago, Cassius Dionysius, and other writers have left in their books remarks on them, but scattered and unsystematic. These Seius seems to have read, and as a result he gets more revenue from such pasturing out of one villa than others receive from a whole farm." [14] "You are quite right," said Merula; "I have seen there large flocks of geese, chickens, pigeons, cranes, and peafowl, not to speak of numbers of dormice, fish, boars, and other game. His book-keeper, a freedman who waited on Varro and used to entertain me when his patron was away from home, told me that he received, because of such husbandry, more than 50,000 sesterces from the villa every year." When Axius expressed his surprise, I remarked to him: "Doubtless you know my maternal aunt's place in the Sabine country, at the twenty-fourth milestone from Rome on the Via Salaria?" [15] "Of course," he replied; "it is my custom to break the journey there at noon in summer, when I am on my way to Reate from the city, and to camp there at night in winter when I am on my way from there to town." "Well, from the aviary alone which is in that villa, I happen to know that there were sold 5,000 fieldfares, for three denarii apiece, so that that department of the villa in that year brought in sixty thousand sesterces — twice as much as your farm of 200 iugera at Reate brings in." "What? Sixty?" exclaimed Axius, "Sixty? Sixty?

You are joking!”^[16] “Sixty,” I repeated. “But to reach such a haul as that you will need a public banquet or somebody’s triumph, such as that of Metellus Scipio at that time, or the club dinners which are now so countless that they make the price of provisions go soaring. If you can’t look for this sum in all other years, your aviary, I hope, will not go bankrupt on you; and if fashions continue as they now are, it will happen only rarely that you miss your reckoning. For how rarely is there a year in which you do not see a banquet or a triumph, or when the clubs do not feast?” “Why,” said he, “in this time of luxury it may fairly be said that there is a banquet every day within the gates of Rome.”^[17] Was it not Lucius Abuccius, who is, as you know, an unusually learned man (his writings are quite in the manner of Lucilius), who used to remark likewise that his estate near Alba was always beaten in feeding by his steading? for his land brought in less than 10,000, and his steading more than 20,000 sesterces. He also claimed that if he had got a villa near the sea, where he wanted one, he would take in more than 100,000 from the villa. Come, did not Marcus Cato, when he took over the guardianship of Lucullus recently, sell the fish from his ponds for 40,000 sesterces?”^[18] “My dear Merula,” said Axius, “take me, I beg, as your pupil in this villa-feeding.” “Certainly,” he replied; “I will begin as soon as you promise the minerval.” “That is satisfactory to me; you may have it to-day, or I’ll pay it time and again from that feeding.” “Humph,” replied Appius, “the first time some geese or peacocks out of your flock die!” “Well,” retorted Axius, “what does it matter if you eat fowls or fish that have died, seeing that you never eat them unless they are dead? But, I pray you,” said he, “lead me into the way of the science of villa-husbandry, and set forth its scope and method.”

III.

Merula non gravate, Primum, inquit, dominum scientem esse oportet earum rerum, quae in villa circumve eam ali ac pasci possint, ita ut domino sint fructui ac delectationi. Eius disciplinae genera sunt tria: ornithones, leporaria, piscinae. Nunc ornithonas dico omnium alitum, quae intra parietes villae solent pasci. Leporaria te accipere volo non ea quae tritavi nostri dicebant, ubi soli lepores sint, sed omnia saepta, afficta villae quae sunt et habent inclusa animalia, quae pascantur. Similiter piscinas dico eas, quae in aqua dulci aut salsa inclusos habent pisces ad villam. Harum rerum singula genera minimum in binas species dividi possunt: in prima parte ut sint quae terra modo sint contentae, ut sunt pavones turtures turdi; in altera specie sunt quae non sunt contentae terra solum, sed etiam aquam requirunt, ut sunt anseres querquedulae anates. Sic alterum genus illud venaticum duas habet diversas species, unam, in qua est aper caprea lepus; altera item extra villam quae sunt, ut apes cochleae glires. Terti generis aquatilis item species duae, partim quod habent pisces in aqua dulci, partim quod in marina. De his sex partibus ad ista tria genera item tria genera artificum paranda, aucupes venatores piscatores, aut ab iis emenda quae tuorum servorum diligentia tuearis in fetura ad partus

et nata nutrire sagine, in macellum ut perveniant. Neque non etiam quaedam adsumenda in villam sine retibus aucupis venatoris piscatoris, ut gires cochleas gallinas. Earum rerum cultura instituta prima ea quae in villa habetur; non enim solum augures Romani ad auspicia primum pararunt pullos, sed etiam patres familiae rure. Secunda, quae macerie ad villam venationis causa cluduntur et propter alvaria; apes enim subter subgrundas ad initio villatico usae tecto. Tertiae piscinae dulces fieri coeptae et e fluminibus captos recipere ad se pisces. Omnibus tribus his generibus sunt bini gradus; superiores, quos frugalitas antequam, inferiores, quos luxuria posterior adiecit. Primus enim ille gradus anticus maiorum nostrum erat, in quo essent aviaria duo dumtaxat: in plano cohors, in qua pascebantur gallinae, et earum fructus erat ova et pulli; alter sublimis, in quo erant columbae in turribus aut summa villa. Contra nunc aviaria sunt nomine mutato, quod vocantur ornithones, quae palatium suave domini paravit, ut tecta maiora habeant, quam tum habebant totas villas, in quibus stabulentur turdi ac pavones. Sic in secunda parti ac leporario pater tuus, Axi, praeterquam lepusculum e venatione vidit numquam. Neque enim erat magnum id saeptum, quod nunc, ut habeant multos apros ac capreas, complura iugera maceris concludunt. Non tu, inquit mihi, cum emisti fundum Tusculanum a M. Pisone, in leporario apri fuerunt multi? In tertia parti quis habebat piscinam nisi dulcem et in ea dumtaxat squalos ac mugiles pisces? Quis contra nunc minthos non dicit sua nihil interesse, utrum iis piscibus stagnum habeat plenum an ranis? Non Philippus, cum ad Ummidium hospitem Casini devertisset et ei e tuo flumine lupum piscem formosum apposuisset atque ille gustasset et exspuisset, dixit, "Peream, si piscem putavi esse"? Sic nostra aetas in quam luxuriam propagavit leporaria, hac piscinas protulit ad mare et in eas pelagios greges piscium revocavit. Non propter has appellati Sergius Orata et Licinius Murena? Quis enim propter nobilitates ignorat piscinas Philippi, Hortensi, Lucullorum? Quare unde velis me incipere, Axi, dic.

[3.1] Merula began without hesitation: "In the first place, the owner ought to have so clear an idea of those creatures which can be reared or fed in the villa and around it that they may afford him both profit and pleasure. There are three divisions of this science: the aviary, the hare-warren, and the fish-pond. Under the head of aviary I include enclosures for all fowls which are usually reared within the walls of the villa. [2] Under the head of hare-warrens I wish you to understand, not those which our forefathers called by that name — places where there are only hares — but all enclosures which are attached to the villa and keep animals enclosed for feeding. Similarly, by the term fish-pond I mean ponds which keep fish enclosed near the villa, either in fresh or salt water. [3] Each of these divisions may be subdivided into at least two: thus, under the first head, those which are not content with the land only, but need water also, as geese, teal, and ducks. In the same way the second head — that of game — contains its two diverse classes, one under which come the boar, the roe, and the hare, and the second, those which are also outside the villa,

such as bees, snails, and dormice. [4] There are likewise two divisions of the third class, the aquatic, inasmuch as fish are kept sometimes in fresh water, sometimes in sea-water. For the three classes formed of these six subdivisions must be secured three classes of craftsmen — fowlers, hunters, fishers — or else you must purchase from these those creatures which you are to preserve by the activity of your own servants during the period of gestation and up to the time of birth, and when they are born to rear and fatten so that they may reach the market. And there are, moreover, certain other creatures which are to be brought into the villa without the use of net by fowler or hunter or fisher, such as dormice, snails, and chickens. [5] The rearing of the last named, chickens, was the first to be attempted within the villa; for not only did Roman soothsayers raise chickens first for their auspices, but also the heads of families in the country. Next came the animals which are kept in an enclosure near the villa for hunting, and hard by it the bee-hives; for from the first bees took advantage of the roof of the villa under the eaves. Thirdly there began to be built fresh-water ponds, to which were carried fish which had been caught from the streams. [6] Each of these three classes has two stages: the earlier, which the frugality of the ancients observed, and the later, which modern luxury has now added. For instance, first came the ancient stage of our ancestors, in which there were simply two aviaries: the barn-yard on the ground in which the hens fed — and their returns were eggs and chickens — and the other above ground, in which were the pigeons, either in cotes or on the roof of the villa. [7] On the other hand, in these days, the aviaries have changed their name and have become ornithones; and those which the dainty palate of the owner has constructed have larger buildings for the sheltering of fieldfares and peafowl than whole villas used to have in those days. [8] So too in the second division, the warren, your father, Axius, never saw any better game from his hunting than a paltry hare. For in his day there was no great preserve, whereas nowadays people enclose many acres within walls, so as to keep numbers of wild boars and roes. When you bought your place near Tusculum from Marcus Piso,” he added, turning to me, “were there not many wild boars in the ‘hare-warren?’ [9] In the third division, who had a fish-pond, except a fresh-water pond, or kept any fish in it except squali or mugiles? On the other hand what young fop in these days will not tell you that he would as soon have his pond full of frogs as of such fish as these? You remember that Philippus once, when he had turned aside to visit his friend Ummidius at Casinum, was served with a fine pike from your river; he tasted it, spat it out, and exclaimed: ‘I’ll be hanged if I didn’t think it was fish!’ [10] So our generation, with the same extravagance with which it extended the boundaries of its warrens, has thrust its fish-ponds to the sea, and has brought into them whole schools of deep-sea fish. Was it not from these that Sergius Orata (‘Goldfish’) and Licinius Murena (‘Lamprey’) got their names? And, indeed, who does not know, on account of their fame, the fish-ponds of Philippus, Hortensius, and the Luculli? So, then, where do you wish me to begin,

IV.

Ille, Ego vero, inquit, ut aiunt post principia in castris, id est ab his temporibus quam superioribus, quod ex pavonibus fructus capiuntur maiores quam e gallinis. Atque adeo non dissimulabo, quod volo de ornithone primum, quod lucri fecerunt hoc nomen turdi. Sexaginta enim milia Fircellina excande me fecerunt cupiditate.

Merula, Duo genera sunt, inquit, ornithonis: unum delectationis causa, ut Varro hic fecit noster sub Casino, quod amatores invenit multos; alterum fructus causa, quo genere macellarii et in urbe quidam habent loca clausa et rure, maxime conducta in Sabinis, quod ibi propter agri naturam frequentes apparent turdi. Ex iis tertii generis voluit esse Lucullus coniunctum aviarium, quod fecit in Tusculano, ut in eodem tecto ornithonis inclusum triclinium haberet, ubi delicate cenitaret et alios videret in mazonomo positos coctos, alios volitare circum fenestras captos. Quod inutile invenerunt. Nam non tantum in eo oculos delectant intra fenestras aves volitantes, quantum offendit quod alienus odor opplet nares.

[4.1] “Personally,” he replied, “if I may use a military figure, I should like you to begin post principia, that is, with the present rather than the former times, as larger returns are had from peafowl than from chickens. And what is more, I will make no secret of the fact that I want to hear first about the ornithon, because those fieldfares have made the word mean ‘gain’; for those sixty thousand sesterces of Fircellia have set me on fire with greed.”

[2] “There are,” resumed Merula, “two kinds of ornithon; one merely for pleasure, such as our friend Varro has built near Casinum, which has found many admirers, and the other for profit. Of the latter class are the enclosures which those who supply fowl for the market keep, some in the city, others in the country; especially the leased enclosures in the Sabine district, as, because of the nature of the country, large flocks of fieldfares are found there. [3] Lucullus claimed that the aviary which he built on his place near Tusculum, formed by a combination of these two, constituted a third class. Under the same roof he had an aviary and a dining-room, where he could dine luxuriously, and see some birds lying cooked on the dish and others fluttering around the windows of their prison. But they found it unserviceable; for in it the birds fluttering around the windows do not give pleasure to the eyes to the same extent that the disagreeable odour which fills the nostrils gives offence.

V.

Sed quod te malle arbitror, Axi, dicam de hoc quod fructus causa faciunt, unde, non ubi, sumuntur pingues turdi. Igitur testudo, aut peristylum tectum

tegulis aut rete, fit magna, in qua milia aliquot turdorum ac merularum includere possint, quidam cum eo adiciant praeterea aves alias quoque, quae pingues veneunt care, ut miliariae ac coturnices. In hoc tectum aquam venire oportet per fistulam et eam potius per canales angustas serpere, quae facile extergeri possint (si enim late ibi diffusa aqua, et inquinatur facilius et bibitur inutilius), et ex eis caduca quae abundat per fistulam exire, ne luto aves laborent. Ostium habere humile et angustum et potissimum eius generis, quod cocliam appellant, ut solet esse in cavea, in qua tauri pugnare solent; fenestras raras, per quas non videantur extrinsecus arbores aut aves, quod earum aspectus ac desiderium marcescere facit volucres inclusas. Tantum locum luminis habere oportet, ut aves videre possint, ubi assidant, ubi cibus, ubi aqua sit. Tectorio tacta esse levi circum ostia ac fenestras, nequa intrare mus aliave quae bestia possit. Circum huius aedificii parietes intrinsecus multos esse palos, ubi aves assidere possint, praeterea perticis inclinatis ex humo ad parietem et in eis transversis gradatim modicis intervallis perticis adnexis ad speciem cancellorum scaenicorum ac theatri. Deorsum in terram esse aquam, quam bibere possint, cibatu offas positas. Eae maxime glomerantur ex ficis et farre mixto. Diebus viginti antequam tollere vult turdos, largius dat cibum, quod plus ponit et farre subtiliore incipit alere. In hoc tecto caveas, quae caveae tabulata habeant aliquot ad perticarum supplementum. Contra hic aviarius, quae mortuae ibi sunt aves, ut domino numerum reddat, solet ibidem servare. Cum opus sunt, ex hoc aviario ut sumantur idoneae, excludantur in minusculum aviarium, quod est coniunctum cum maiore ostio, lumine illustriore, quod seclusorium appellant. Ibi cum eum numerum habet exclusum, quem sumere vult, omnes occidit. Hoc ideo in secluso clam, ne reliqui, si videant, despondeant animum atque alieno tempore venditoris moriantur. Non ut advenae volucres pullos faciunt, in agro ciconiae, in tecto hirundines, sic aut hic aut illic turdi, qui cum sint nomine mares, re vera feminae quoque sunt. Neque id non secutum ut esset in merulis, quae nomine feminino mares quoque sunt. Praeterea volucres cum partim advenae sint, ut hirundines et grues, partim vernaculae, ut gallinae ac columbae, de illo genere sunt turdi adventicio ac quotannis in Italiam trans mare advolant circiter aequinoctium autumnale et eodem revolant ad aequinoctium vernum, et alio tempore, turtures ac coturnices immuni numero. Hoc ita fieri apparet in insulis propinquis Pontiis, Palmariae, Pandateriae. Ibi enim in prima volatura cum veniunt, morantur dies paucos requiescendi causa itemque faciunt, cum ex Italia trans mare remeant.

Appius Axio, Si quinque milia hoc coieceris, inquit, et erit epulum ac triumphus, sexaginta milia quae vis statim in fenus des licebit multum. Tum mihi, tu dic illud alterum genus ornithonis, qui animi causa constitutus a te sub Casino fertur, in quo diceris longe vicisse non modo archetypon inventoris nostri ornithotrophion M. Laenii Strabonis, qui Brundisii hospes noster primus in peristylo habuit exhedra conclusas aves, quas pasceret obiecto rete, sed etiam in Tusculano magna aedificia Luculli. Quoi ego: Cum habeam sub

oppido Casino flumen, quod per villam fluat, liquidum et altum marginibus lapideis, latum pedes quinquaginta septem, et e villa in villam pontibus transeatur, longum pedes DCCCCL directum ab insula, quae est in imo fluvio, ubi confluit altera amnis, ad summum flumen, ubi est museum, circum huius ripas ambulatio sub dio pedes lata denos, ab hac est in agrum versus ornithonis locus ex duabus partibus dextra et sinistra maceriis altis conclusus. Inter quas locus qui est ornithonis deformatus ad tabulae litterariae speciem cum capitulo, forma qua est quadrata, patet in latitudinem pedes XLVIII, in longitudinem pedes LXXII; qua ad capitulum rutundum est, pedes XXVII. Ad haec, ita ut in margine quasi infimo tabulae descripta sit, ambulatio, ab ornithone plumula, in qua media sunt caveae, qua introitus in aream est. In limine, in lateribus dextra et sinistra porticus sunt primoribus columnis lapideis, pro mediis arbusculis humilibus ordinatae, cum a summa macerie ad epistylum tecta porticus sit rete cannabina et ab epistyllo ad stylobaten. Hae sunt avibus omnigenus oppletae, quibus cibus ministratur per retem et aqua rivolo tenui affluit. Secundum stylobatis interiorem partem dextra et sinistra ad summam aream quadratam e medio diversae duae non latae oblongae sunt piscinae ad porticus versus. Inter eas piscinas tantummodo accessus semita in tholum, qui est ultra rutundus columnatus, ut est in aede Catuli, si pro parietibus feceris columnas. Extra eas columnas est silva manu sata grandibus arboribus, ut infima perluceat, tota saepta maceriis altis. Intra tholi columnas exteriores lapideas et totidem interiores ex abiete tenues locus est pedes quinque latus. Inter columnas exteriores pro pariete reticuli e nervis sunt, ut prospici in silvam possit et quae ibi sunt videri neque avis ea transire. Intra interiores columnas pro pariete rete aviarium est obiectum. Inter has et exteriores gradatim substructum ut theatridion avium, mutuli crebri in omnibus columnis impositi, sedilia avium. Intra retem aves sunt omnigenus, maxime cantrices, ut lusciniolae ac merulae, quibus aqua ministratur per canaliculum, cibus obicitur sub retem. Subter columnarum stylobaten est lapis a falere pedem et dodrantem alta; ipsum falere ad duo pedes altum a stagno, latum ad quinque, ut in culcitas et columellas convivae pedibus circumire possint. Infimo intra falere est stagnum cum margine pedali et insula in medio parva. Circum falere et navalia sunt excavata anatium stabula. In insula est columella, in qua intus axis, qui pro mensa sustinet rotam radiatam, ita ut ad extremum, ubi orbile solet esse, arcuata tabula cavata sit ut tympanum in latitudinem duo pedes et semipedem, in altitudinem palmum. Haec ab uno puero, qui ministrat, ita vertitur, ut omnia una ponantur et ad bibendum et ad edendum et admoveantur ad omnes convivas. Ex suggesto faleris, ubi solent esse peripetasmata, prodeunt anates in stagnum ac nant, e quo rivus pervenit in duas, quas dixi, piscinas, ac pisciculi ultro ac citro commetant, cum et aqua calida et frigida ex orbi ligneo mensaque, quam dixi in primis radiis esse, epitoniis versis ad unum quemque factum sit ut fluat convivam. Intrinsecus sub tholo stella lucifer interdium, noctu hesperus, ita circumeunt ad infimum hemisphaerium ac moventur, ut indicent, quot sint horae. In eodem

hemisphaerio medio circum cardinem est orbis ventorum octo, ut Athenis in horologio, quod fecit Cyrrestes; ibique eminens radius a cardine ad orbem ita movetur, ut eum tangat ventum, qui flet, ut intus scire possis.

Cum haec loqueremur, clamor fit in campo. Nos athletae comitiorum cum id fieri non miraremur propter studia suffragatorum et tamen scire vellemus, quid esset, venit ad nos Pantuleius Parra, narrat ad tabulam, cum diriberent, quendam deprensus tesserulas coicientem in loculum, eum ad consulem tractum a fautoribus competitorum. Pavo surgit, quod eius candidati custos dicebatur deprensus.

[5.1] "I shall, however, as I suppose you prefer, Axius, discuss the aviary which is built for profit — the place from which fat fieldfares are taken, and not the place where they are taken. Well, there is built a large domed building, or a peristyle covered with tiles or netting, in which several thousand fieldfares and blackbirds can be enclosed; [2] though some breeders add besides other birds which, when fattened, bring a high price, such as ortolans and quails. Into this building water should be conducted through a pipe and allowed to spread preferably through narrow channels which can easily be cleaned (for if the water spreads there in pools, it more easily becomes foul and is not good for drinking), and the superfluous drip-water from these should run out through a pipe, so that the birds may not be troubled by mud. [3] It should have a low, narrow door, and preferably of the kind which they call *coclia*, such as usually are seen in the pit where bullfights are held. The windows should be few, and so arranged that trees and birds outside cannot be seen; for the sight of these, and the longing for them, makes the imprisoned birds grow thin. It should have only enough openings for light to enable the birds to see where to perch, and where the food and water is. It should be faced around the doors and windows with smooth plaster, so that no mice or other vermin can enter anywhere. [4] Around the walls of this building on the inside there should be a number of poles for the birds to perch on; and, in addition, rods sloping from ground to wall, with transverse rods fastened to them in steps at moderate intervals, after the fashion of the balustrades of the theatre or the arena. At the bottom, on the ground, there should be water for them to drink, and here should be placed cakes for their food. These are usually made by kneading a mixture of figs and spelt. Twenty days before the breeder desires to remove fieldfares, he feeds them more liberally, giving larger quantities and beginning to feed them on spelt ground finer. In this building there should be recesses, equipped with several shelves, as a supplement to the perches; [5] it is here, facing the perches, that the caretaker usually keeps on hand the birds which have died in the place, so as to render account to his master. When it become necessary to remove from this aviary birds which are fit for market, they should be taken out and put into a smaller aviary, called the *seclusorium* (coop), which is connected by a door with the larger aviary and better lighted. When he has the number which he desires to take shut up here, he kills them

all. [6] The reason for doing this privately in a separate room is to prevent the others, if they should see it, from moping and dying at a time which would be inopportune for the seller. Fieldfares do not rear their young here and there as do the other migratory birds, storks in the field, swallows under the roof [and though their name (*turdi*) is masculine, there are in fact females too; nor is the case otherwise as regards blackbirds (*merulae*) — though they have a feminine name, there are also males]. [7] Again, birds being partly migratory, as swallows and cranes, and partly indigenous, as hens and doves, fieldfares belong to the former class, the migratory, and fly yearly across the sea into Italy about the time of the autumnal equinox, and back again whence they came about the spring equinox, as do turtle-doves and quail at another season in vast numbers. The proof of this is seen in the near-by islands of Pontiae, Palmaria, and Pandateria; for when they arrive in these at the first migration, they remain there for a few days to rest, and do the same when they leave Italy for their return across the sea.

[8] “If you put 5,000 birds into this aviary,” said Appius to Axius, “and there comes a banquet and a triumph, you may at once put at high interest that 60,000 sesterces which you want.” Then, turning to me, he said: “Do you now describe that other kind of aviary which I am told you built for your amusement near Casinum, in the construction of which you are reputed to have far surpassed not only the archetype left by its inventor, our friend Marcus Laenius Strabo, our host at Brundisium, who was the first to keep birds penned up in a recess in his peristyle, feeding them through a net covering, but also Lucullus’ huge buildings on his place at Tusculum.” [9] I replied: “I own, near the town of Casinum, a stream which runs through my villa, clear and deep, with a stone facing, 57 feet wide, and requiring bridges for passage from one side of the villa to the other; it is 950 feet in a straight line from the island in the lowest part of the stream, where another stream runs into it, to the upper part of the stream, where the Museum is situated. [10] Along the banks of this stream there runs an uncovered walk 10 feet broad; off this walk and facing the open country is the place in which the aviary stands, shut in on two sides, right and left, by high walls. Between these lies the site of the aviary, shaped in the form of a writing-tablet with a top-piece, the quadrangular part being 48 feet in width and 72 feet in length, while at the rounded top-piece it is 27 feet. [11] Facing this, as it were a space marked off on the lower margin of the tablet, is an uncovered walk with a plumula extending from the aviary, in the middle of which are cages; and here is the entrance to the courtyard. At the entrance, on the right side and the left, are colonnades, arranged with stone columns in the outside rows and, instead of columns in the middle, with dwarf trees; while from the top of the wall to the archway the colonnade is covered with a net of hemp, which also continues from the archway to the base. These colonnades are filled with all manner of birds, to which food is supplied through the netting, while water flows to them in a tiny rivulet. [12] Along the inner side of the base of the columns, on the right side

and on the left, and extending from the middle to the upper end of the open quadrangle, are two oblong fish-basins, not very wide, facing the colonnades. Between these basins is merely a path giving access to the tholos, which is a round domed building outside the quadrangle, faced with columns, such as is seen in the hall of Catulus, if you put columns instead of walls. Outside these columns is a wood planted by hand with large trees, so that the light enters only at the lower part, and the whole is enclosed with high walls. [13] Between the outer columns of the rotunda, which are of stone, and the equal number of slender inner columns, which are of fir, is a space five feet wide. Between the exterior columns, instead of a wall there is a netting of gut, so that there is a view into the wood and the objects in it, while not a bird can get out into it. In the spaces between the interior columns the aviary is enclosed with a net instead of a wall. Between these and the exterior columns there is built up step by step a sort of little bird-theatre, with brackets fastened at frequent intervals to all the columns as bird-seats. [14] Within the nettings are all manner of birds, chiefly songsters, such as nightingales and blackbirds, to which water is supplied by means of a small trench, while food is passed to them under the netting. Below the base of the columns is stone-work rising a foot and nine inches above the platform; the platform itself rises about two feet above a pond, and is about five feet wide, so that the guests can walk in among the benches and the small columns. At the foot of the platform inside, is the pond, with a border a foot wide, and a little island in the middle. Along the platform also docks have been hollowed out as shelters for ducks. [15] On the island is a small column, and on the inside of it is a post, which holds up, instead of a table, a wheel with spokes, in such fashion that on the outer rim, where the fellow usually stands, there is a curved board with raised edges like a tambourine, two and a half feet in width and a palm in height. This is revolved by a single manservant in such a way that everything to drink and eat is placed on it at once and moved around to all the guests. [16] From the side of the platform, on which there are usually coverlets, the ducks come out into the pond and swim about; from this pond a stream runs into the two fish-basins which I have described, and the minnows dart back and forth, while it is so arranged that cold and warm water flows for each guest from the wooden wheel and the table which, as I have said is at the ends of the spokes, by the turning of cocks. [17] Inside, under the dome of the rotunda, the morning-star by day and the evening-star at night circle around near the lower part of the hemisphere, and move in such a manner as to show what the hour is. In the middle of the same hemisphere, running around the axis, is a compass of the eight winds, as in the horologium at Athens, which was built by the Cyrrestrian; and there a pointer, projecting from the axis, runs about the compass in such a way that it touches the wind which is blowing, so that you can tell on the inside which it is."

[18] While we were thus conversing, a shouting arose in the Campus. We old hands at politics were not surprised at this occurrence, as we knew how

excited an election crowd could become, but still we wanted to know what it meant; thereupon Pantuleius Parra comes to us, and tells us that a man had been caught, while they were sorting the ballots in the office, in the act of casting ballots into the ballot-box; and that he had been dragged off to the consul by the supporters of the other candidates. Pavo arose, as it was the watcher for his candidate who was reported to have been arrested.

VI.

Axius, De pavonibus, inquit, libere licet dicas, quoniam discessit Fircellius, qui, secus siquid diceres de iis, gentilitatis causa fortasse an tecum duceret serram. Quoi Merula, De pavonibus nostra memoria, inquit, greges haberi coepti et venire magno. Ex iis M. Aufidius Lurco supra sexagena milia nummum in anno dicitur capere. Ii aliquanto pauciores esse debent mares quam feminae, si ad fructum spectes; si ad delectationem, contra; formosior enim mas. Pascendi greges agrestes. Transmarini esse dicuntur in insulis, Sami in luco Iunonis, item in Planasia insula M. Pisonis. Hi ad greges constituendos parantur bona aetate et bona forma. Huic enim natura formae e volucribus dedit palmam. Ad admissuram haec minores bimae non idoneae nec iam maiores natu. Pascuntur omne genus obiecto frumento, maxime hordeo. Itaque Seius iis dat in menses singulos hordei singulos modios, ita ut in fetura det uberius, antequam salire incipiant. In has a procuratore ternos pullos exigit eosque, cum creverunt, quinquagenis denariis vendit, ut nulla avis hunc assequatur fructum. Praeterea ova emit ac supponit gallinis, ex quibus excusos pullos refert in testudinem eam, in qua pavones habet. Quod tectum pro multitudine pavonum fieri debet et habere cubilia discreta, tectorio levata, quo neque serpens neque bestia accedere ulla possit; praeterea habere locum ante se, quo pastum exeant diebus apricis. Utrumque locum purum esse volunt hae volucres. Itaque pastorem earum cum vatillo circumire oportet ac stercus tollere ac conservare, quod et ad agri culturam idoneum est et ad substramen pullorum. Primus hos Q. Hortensius augurali aditiali cena posuisse dicitur, quod potius factum tum luxuriosi quam severi boni viri laudabant. Quem cito secuti multi extulerunt eorum pretia, ita ut ova eorum denariis veneant quinis, ipsi facile quinquagenis, grex centenarius facile quadragena milia sestertia ut reddat, ut quidem Abucius aiebat, si in singulos ternos exigeret pullos, perfici sexagenas posse.

[6.1] "You may speak freely about peafowl," said Axius, "since Fircellius has gone; if you should say anything out of the way about them, he would perhaps have a bone to pick with you for the credit of the family." To whom Merula said: "As to pea-fowl, it is within our memory that flocks of them began to be kept and sold at a high price. From them Marcus Aufidius Lurco is said to receive an income of more than 60,000 sesterces a year. There should be somewhat fewer males than females if you have an eye to the financial returns; but the opposite if you look at the pleasure, for the male is handsomer.

[2] They should be pastured in flocks in the fields. Across the water they are said to be reared in the islands — on Samos, in the grove of Juno, and likewise in Marcus Piso's island of Planasia. For the forming of a flock they are to be secured when they are young and of good appearance; for nature has awarded the palm of beauty to this fowl over all winged things. The hens are not suited for breeding under two years, and are no longer suited when they get rather old. [3] They eat any kind of grain placed before them, and especially barley; so Seius issues a modius of barley a month per head, with the exception that he feeds more freely during the breeding season, before they begin to tread. He requires of his breeder three chicks for each hen, and these, when they are grown, he sells for fifty denarii each, so that no other fowl brings in so high a revenue. [4] He buys eggs, too, and places them under hens, and the chicks which are hatched from these he places in that domed building in which he keeps his peafowl. This building should be made of a size proportioned to the number of peafowl, and should have separate sleeping quarters, coated with smooth plaster, so that no serpent or animal can get in; [5] it should also have an open place in front of it, to which they may go out to feed on sunny days. These birds require that both places be clean; and so their keeper should go around with a shovel and pick up the droppings and keep them, as they are useful for fertilizer and as litter for chicks. [6] It is said that Quintus Hortensius was the first to serve these fowl; it was on the occasion of his inauguration as aedile, and the innovation was praised at that time rather by the luxurious than by those who were strict and virtuous. As his example was quickly followed by many, the price has risen to such a point that the eggs sell for five denarii each, the birds themselves sell readily for 50 each, and a flock of 100 easily brings 40,000 sesterces — in fact, Abuccius used to say that if one required three chicks to every hen, the total might amount to 60,000.

VII.

Interea venit apparitor Appi a consule et augures ait citari. Ille foras exit e villa. At in villam intro involant columbae, de quibus Merula Axio: Si umquam peristerotrophion constituisses, has tuas esse putares, quamvis ferae essent. Duo enim genera earum in peristerotrophio esse solent: unum agreste, ut alii dicunt, saxatile, quod habetur in turribus ac columinibus villae, a quo appellatae columbae, quae propter timorem naturalem summa loca in tectis captant; quo fit ut agrestes maxime sequantur turres, in quas ex agro evolant suapte sponte ac remeant. Alterum genus columbarum est clementius, quod cibo domestico contentum intra limina ianuae solet pasci. Hoc genus maxime est colore albo, illud alterum agreste sine albo, vario. Ex iis duabus stirpibus fit miscellum tertium genus fructus causa, atque incedunt in locum unum, quod alii vocant peristerona, alii peristerotrophion, in quo uno saepe vel quinque milia sunt inclusae. Peristeron fit ut testudo magna, camera tectus, uno ostio angusto, fenestris punicanis aut latioribus reticulatis utrimque, ut

locus omnis sit illustris, neve quae serpens aliudve quid animal maleficum introire queat. Intrinsecus quam levissimo marmorato toti parietes ac camarae oblinuntur et extrinsecus circum fenestras, ne mus aut lacerta qua adrepere ad columbaria possit. Nihil enim timidius columba. Singulis paribus columbaria fiunt rutunda in ordinem crebra, ordines quam plurimi possunt a terra usque ad camaram. Columbaria singula esse oportet ut os habeat, quo modo introire et exire possit, intus ternarum palmarum ex omnibus partibus. Sub ordines singulos tabulae fictae ut sint bipalmes, quo utantur vestibulo ac prodeant. Aquam esse oportet quae influat, unde et bibere et ubi lavari possint. Permundae enim sunt hae volucres. Itaque pastorem columbarum quotquot mensibus crebro oportet everrere; est enim quod eum inquinat locum appositum ad agri culturam, ita ut hoc optimum esse scripserint aliquot. Siquae columba quid offenderit, ut medeatur; siquae perierit, ut efferatur; siqui pulli idonei sunt ad vendendum, promat. Item quae fetae sunt, certum locum ut disclusum ab aliis rete habeat, quo transferantur, e quo foras ex peristerone evolare possint matres. Quod faciunt duabus de causis: una, si fastidiunt aut inclusae consenescent, quod libero aere, cum exierint in agros, redintegrentur; altera de causa propter inlicium. Ipsae enim propter pullos, quos habent, utique redeunt, nisi a corvo occisae aut ab accipitre interceptae. Quos columbarii interficere solent duabus virgis viscatis defictis in terra inter se curvatis, cum inter eas posuerint obligatum animal, quod petere soleant accipitres, qui ita decipiuntur, cum se obleverunt visco. Columbas redire solere ad locum licet animadvertere, quod multi in theatro e sinu missas faciunt, atque ad locum redeunt, quae nisi reverterentur, non emitterentur. Cibus apponitur circum parietes in canalibus, quas extrinsecus per fistulas supplent. Delectantur milio, tritico, hordeo, piso, fasiolis, ervo. Item fere haec, in turribus ac summis villis qui habent agrestes columbas, quoad possunt, imitandum. In peristeronas aetate bona parandum, neque pullos neque vetulas, totidem mares quot feminas. Nihil columbis fecundius. Itaque diebus quadragenis concipit et parit et incubat et educat. Et hoc fere totum annum faciunt; tantummodo intervallum faciunt a bruma ad aequinoctium vernum. Pulli nascuntur bini, qui simulac creverunt et habent robur, cum matribus pariunt. Qui solent saginare pullos columbinos, quo pluris vendant, secludunt eos, cum iam pluma sunt tecti. Deinde manducato candido farciunt pane; hieme hoc bis, aestate ter, mane meridie vesperi; hieme demunt cibum medium. Qui iam pinnas incipiunt habere, relinunt in nido inlisis cruribus et matribus, uberius ut cibo uti possint, obiciunt. Eo enim totum diem se et pullos pascunt. Qui ita educantur, celerius pinguiores fiunt quam alii, et candidae fiunt parentes eorum. Romae, si sunt formosi, bono colore, integri, boni seminis, paria singula volgo veneunt ducenis nummis nec non eximia singulis milibus nummum. Quas nuper cum mercator tanti emere vellet a L. Axio, equite Romano, minoris quadringentis denariis datorum negavit. Axius, Si possem emere, inquit, peristerona factum, quem ad modum in aedibus cum habere vellem, emi fictilia columbaria, iam issem emptum et misissem ad

villam. Quasi vero, inquit Pica, non in urbe quoque sint multi. An tibi columbaria qui in tegulis habent, non videntur habere peristeronas, cum aliquot supra centum milium sestertium habeant instrumentum? E quis alicuius totum emas censeo, et antequam aedificas rure, magnum condiscas hic in urbe cotidie lucrum assem semissem condere in loculos. Tu, Merula, sic perge deinceps.

[7.1] Meanwhile Appius's bailiff comes with a message from the consul that the augurs are summoned, and he leaves the villa. But pigeons fly into the villa, and Merula, pointing to them, remarks to Axius: "If you had ever built a dove-cote you might think these were your doves, wild though they are. For in a dove-cote there are usually two species of these: one the wild, or as some call them, the rock-pigeon, which lives in turrets and gable-ends (columina) of the farmhouse — whence the name columbae — and these, because of their natural shyness, hunt for the highest peak of the roof; hence the wild pigeons chiefly hunt for the turrets, flying into them, from the fields and back again, as the fancy takes them. [2] The other species of pigeon is gentler, and being content with the food from the house usually feeds around the doorstep. This species is generally white, while the other, the wild, has no white, but is variously coloured. From these two stocks is bred for profit a third hybrid species; these are put in a place called by some peristeron and by others peristerotrophion, and often a single one of these will contain as many as 5,000. [3] The peristeron is built in the form of a large building, with a vaulted roof; it has one narrow door and windows of the Punic style, or wider ones with double lattice-work, so that the whole interior is light, but so that no snake or other noxious creature can get in. The whole of the walls and chambers in the interior is covered with the smoothest possible plaster made of marble dust, and the exterior is also plastered around the windows, so that no mouse or lizard can crawl into the pigeon nest; for nothing is more timid than a pigeon. [4] Round nests are constructed for each pair, side by side in a row, and as many rows as possible are run from the floor up to the vaulted roof. Each nest should be so constructed as to have an opening large enough to allow only entrance and exit, and on the interior should be three palms in all directions. Under each row there should be fixed a board two palms wide, to serve as an entrance and walk-way. [5] Provision should be made for water to flow in, so that they may have a place to drink and bathe, for these birds are extremely cleanly. So the pigeon-keeper should sweep them out frequently every month; for the droppings which make the place filthy are so well suited for fertilizing that several writers have stated that it is the best kind. He should see to it that any pigeon which has been hurt be treated, and that any dead one be removed, and should remove the squabs which are fit for market. [6] He should also have a place shut off by a net from the rest, to which the brooding birds may be transferred, and from which the mother-birds may be able to fly away from the pigeon-house. This they do for two reasons: first, if they lose their appetite or grow sickly from confinement, as they are refreshed by the

open air when they fly over the fields, or secondly for a decoy; for they will themselves return in any case, because of the young they have, unless they are killed by a crow or cut off by a hawk. [7] These birds the pigeon-keepers make a practice of killing by planting two limed twigs in the ground, leaning toward each other, after placing between them, with its legs tied, some animal which hawks are in the habit of chasing; and they are caught in this way, when they have smeared themselves with the lime. You may see that doves do return to a place, from the fact that many people let them loose from their bosoms in the theatre and they return to their homes; and if they did not come back they would not be turned loose. [8] Food is furnished them in troughs running around the walls, which are filled from the outside through pipes. Their favourite foods are millet, wheat, barley, peas, kidney-beans, and vetch. Those who have wild pigeons in turrets and in the tops of their villas should imitate these methods so far as they can. Those which are placed in the pigeon-house should be of a proper age, neither squabs nor old birds; and there should be an equal number of cocks and hens. [9] Nothing is more prolific than the pigeon; thus, within a period of forty days it conceives, lays, hatches, and brings off its young. And they continue this, too, through practically the entire year, leaving an interval only between the winter solstice and the vernal equinox. Two chicks are born each time, and as soon as they have grown and have their strength they breed along with their mothers. Those who practise the fattening of squabs to increase their selling price, shut them up as soon as they are covered with down; then they stuff them with white bread which has been chewed, twice a day in winter and three times in summer — morning, noon, and evening; in winter they omit the noon feeding. [10] When they begin to have feathers they are left in the nest, with their legs broken, and are left to their mothers so that they can eat the food more freely; for they feed themselves and their young on it all day long. Birds which are reared in this way fatten more quickly than others, and their parents become white. At Rome, if the birds are handsome, of good colour, sound, and of good breed, single pairs sell usually for 200 sesterces; but unusually fine ones sometimes for 1,000 sesterces. When a trader wanted recently to buy such birds at this price from Lucius Axius, a Roman knight, he said he would not sell for less than 400 denarii.” [11] Axius remarked: “If I could buy a ready-made pigeon-house, as I bought an earthenware dove-cote when I wanted one in my town house, I should already have gone to buy it and have sent it to the farmhouse.” “Just as if,” replied Pica, “there weren’t many of them in the city, also. Or doesn’t it seem to you that people who have dove-cotes on their roof-tiles possess pigeon-houses, inasmuch as some of them have equipment worth more than 100,000 sesterces? I suggest that you buy the complete outfit from one of these, and before you build in the country learn here in the city to put in your purse every day the big profit of a penny or two. But go ahead with your subject, Merula.”

Ille, Turturibus item, inquit, locum constituendum proinde magnum, ac multitudinem alere velis; eumque item ut de columbis dictum est, ut habeat ostium ac fenestras et aquam puram ac parietes camaras munitas tectorio; sed pro columbariis in pariete mutulos aut palos in ordinem, supra quos tegeticulae cannabinae sint impositae. Infimum ordinem oportet abesse a terra non minus tres pedes, inter reliquos dodrantes, a summo ad camaram semipedem, aequè latum ac mutulus a pariete extare potest, in quibus dies noctesque pascuntur. Cibatus quod sit, obiciunt triticum siccum, in centenos vicenos turtures fere semodium, cottidie everrentes eorum stabula, a stercore ne offendantur, quod item servatur ad agrum colendum. Ad saginandum adpositissimum tempus circiter messem. Etenim matres eorum tum optimae sunt, cum pulli plurimi gignuntur, qui ad farturam meliores. Itaque eorum fructus id temporis maxime consistit.

[8.1] “For turtle-doves, also,” he resumed, “a place should be built of a size proportioned to the number you wish to raise; and this, too, as was remarked of pigeons, so that it has a door and windows, clear water, walls and cupola covered with plaster. [2] But instead of nests set in the walls it should have brackets or poles in a row, and over these there should be placed small mats of hemp. The bottom row should be not less than three feet from the ground, between the other rows there should be a space of nine inches, with a half-foot interval between the top and the cupola; and the row should be as wide as the bracket can stand out from the wall, as they feed on the brackets day and night. [3] As to food, dry wheat is given them, about a half-modius for 120 turtle-doves, and their quarters are swept out every day so that they may not suffer harm from the dung — and this is also kept for fertilizing the ground. The most suitable time for fattening is about harvest, for at that time their mothers are at their best, when most chicks are being born, these latter being better for fattening; and hence the income from them is greatest at this time.”

IX.

Axiis, Ego quae requiro farturae membra, de gallinis dic sodes, Merula: tum de reliquis siquid idoneum fuerit ratiocinari, licebit. Igitur sunt gallinae quae vocantur generum trium: villaticae et rusticae et Africanæ. Gallinae villaticae sunt, quas deinceps rure habent in villis. De his qui ornithoboscion instituere vult, id est adhibita scientia ac cura ut capiant magnos fructus, ut factitaverunt Deliacy, haec quinque maxime animadvertant oportet; de emptione, cuius modi et quam multas parent; de fetura, quem ad modum admittant et pariant; de ovis, quem ad modum incubent et excudant; de pullis, quem ad modum et a quibus educuntur; hisce appendix adicitur pars quinta, quem ad modum saginentur. Ex quis tribus generibus proprio nomine vocantur feminae quae sunt villaticae gallinae, mares galli, capi semimares, qui sunt castrati. Gallos castrant, ut sint capi, candenti ferro inurentes ad infima crura, usque dum rumpatur, et quod exstat ulcus, oblinunt figlina creta. Qui spectat ut

ornithoboscion perfectum habeat, scilicet genera ei tria paranda, maxime villaticas gallinas. E quis in parando eligat oportet fecundas, plerumque rubicunda pluma, nigris pinnis, imparibus digitis, magnis capitibus, crista erecta, amplas; hae enim ad partiones sunt aptiores. Gallos salaces qui animadvertunt, si sunt lacertosi, rubenti crista, rostro brevi pleno acuto, oculis ravis aut nigris, palea rubra subalbicanti, collo vario aut aureolo, feminibus pilosis, cruribus brevibus, unguibus longis, caudis magnis, frequentibus pinnis; item qui elati sunt ac vociferant saepe, in certamine pertinaces et qui animalia quae nocent gallinis non modo non pertimescant, sed etiam pro gallinis propugnent. Nec tamen sequendum in seminio legendo Tanagricos et Melicos et Chalcidicos, qui sine dubio sunt pulchri et ad proeliandum inter se maxime idonei, sed ad partus sunt steriliores. Si ducentos alere velis, locus saeptus adtribuendus, in quo duae caveae coniunctae magnae constituendae, quae spectent ad exorientem versus, utraeque in longitudinem circiter decem pedum, latitudine dimidio minores, altitudine paulo humiliores: in utraque fenestra lata tripedalis, et eae pede altiores e viminibus factae raris, ita ut lumen praebeant multum, neque per eas quicquam ire intro possit, quae nocere solent gallinis. Inter duas ostium sit, qua gallinarius, curator earum, ire possit. In caveis crebrae perticae traiectae sint, ut omnes sustinere possint gallinas. Contra singulas perticas in pariete exclusa sint cubilia earum. Ante sit, ut dixi, vestibulum saeptum, in quo diurno tempore esse possint atque in pulvere volutari. Praeterea sit cella grandis, in qua curator habitet, ita ut in parietibus circum omnia plena sint cubilia gallinarum aut exsculpta aut adfecta firmiter. Motus enim, cum incubat, nocet. In cubilibus, cum parturient, acus substernendum; cum pepererunt, tollere substramen et recens aliud subicere, quod pulices et cetera nasci solent, quae gallinam conquiescere non patiuntur; ob quam rem ova aut inaequaliter maturescunt aut consenescent. Quae velis incubet, negant plus XXV oportere ova incubare, quamvis propter fecunditatem pepererit plura, optimum esse partum ab aequinoctio verno ad autumnale. Itaque quae ante aut post nata sunt et etiam prima eo tempore, non supponenda; et ea quae subicias, potius vetulis quam pullitris, et quae rostra aut ungues non habeant acutos, quae debent potius in concipiendo occupatae esse quam incubando. Adpositissimae ad partum sunt anniculae aut bimae. Si ova gallinis pavonina subicias, cum iam decem dies fovere coepit, tum denique gallinacia subicere, ut una excudat. Gallinaciis enim pullis bis deni dies opus sunt, pavoninis ter noveni. Eas includere oportet, ut diem et noctem incubent, praeterquam mane et vespere, dum cibus ac potio is detur. Curator oportet circumeat diebus interpositis aliquot ac vertere ova, ut aequaliter concalefiant. Ova plena sint atque utilia necne, animadverti aiunt posse, si demiseris in aquam, quod inane natet, plenum desidit. Qui ut hoc intellegant concutiant, errare, quod vitale venas confundant in iis. Idem aiunt, cum ad lumen sustuleris, quod perluceat, id esse inane. Qui haec volunt diutius servare, perfricant sale minuto aut muria tres aut quattuor horas eaque abluta condunt in furfures aut acus. In supponendo ova observant ut sint numero

imparia. Ova, quae incubantur, habeantne semen pulli, curator quadriduo postquam incubari coepit intellegere potest. Si contra lumen tenuit et purum unius modi esse animadvertit, putant eiciendum et aliud subiciendum. Excusos pullos subducendum ex singulis nidis et subiciendum ei quae habeat paucos; ab eaque, si reliqua sint ova pauciora, tollenda et subicienda aliis, quae nondum excuderunt et minus habent triginta pullos. Hoc enim gregem maiorem non faciendum. Obiciendum pullis diebus XV primis mane subiecto pulvere, ne rostris noceat terra dura, polentam mixtam cum nasturti semine et aqua aliquanto ante factam intritam, ne tum denique in eorum corpore turgescat; aqua prohibendum. Qua de clunibus coeperint habere pinnas, e capite, e collo eorum crebro eligendi pedes; saepe enim propter eos consenescent. Circum caveas eorum incendendum cornum cervinum, ne quae serpens accedat, quarum bestiarum ex odore solent interire. Prodigendae in solem et in stercilinum, ut volutare possint, quod ita alibiliores fiunt; neque pullos, sed omne ornithoboscion cum aestate, tum utique cum tempestas sit mollis atque apricum; intento supra rete, quod prohibeat eas extra saepta evolare et in eas involare extrinsecus accipitrem aut quid aliud; evitantem caldorem et frigus, quod utrumque iis adversum. Cum iam pinnas habebunt, consuefaciendum ut unam aut duas sectentur gallinas, ceterae ut potius ad pariendum sint expeditae, quam in nutricatu occupatae. Incubare oportet incipere secundum novam lunam, quod fere quae ante, pleraque non succedunt. Diebus fere viginti excidunt. De quibus villaticis quoniam vel nimium dictum, brevitate reliqua compensabo.

Gallinae rusticae sunt in urbe rariae nec fere nisi mansuetae in cavea videntur Romae, similes facie non his gallinis villaticis nostris, sed Africanis. Aspectu ac facie incontaminatae in ornatibus publicis solent poni cum psittacis ac merulis albis, item aliis id genus rebus inusitatis. Neque fere in villis ova ac pullos faciunt, sed in silvis. Ab his gallinis dicitur insula Gallinaria appellata, quae est in mari Tusco secundum Italiam contra montes Liguscos, Intimilium, Album Ingaunum; alii ab his villaticis invectis a nautis, ibi feris factis procreatis. Gallinae Africanae sunt grandes, variae, gibberae, quas meleagridas appellant Graeci. Haec novissimae in triclinium cenantium introierunt e culina propter fastidium hominum. Veneunt propter penuriam magno. De tribus generibus gallinae saginantur maxime villaticae. Eas includunt in locum tepidum et angustum et tenebricosum, quod motus earum et lux pinguitudinis vindicta, ad hanc rem electis maximis gallinis, nec continuo his, quas Melicas appellant falso, quod antiqui, ut Thetim Thelim dicebant, sic Medicam Melicam vocabant. Hae primo dicebantur, quae ex Medica propter magnitudinem erant allatae quaeque ex iis generatae, postea propter similitudinem amplae omnes. Ex iis evulsis ex alis pinnis et e cauda farciunt turundis hordeaceis partim admixtis farina lolleacia aut semine lini ex aqua dulci. Bis die cibum dant, observantes ex quibusdam signis ut prior sit concoctus, antequam secundum dent. Dato cibo, quom perpurgarunt caput, nequos habeat pedes, rursus eas concludunt. Hoc faciunt usque ad dies XXV;

tunc denique pingues fiunt. Quidam et triticeo pane intrito in aquam, mixto vino bono et odorato, farciunt, ita ut diebus XX pingues reddant ac teneras. Si in farciendo nimio cibo fastidiunt, remittendum in datione pro portione, ac decem primis processit, in posterioribus ut deminuat eadem ratione, ut vicesimus dies et primus sint pares. Eodem modo palumbos farciunt ac reddunt pingues.

[9.1] “I wish, Merula,” said Axius, “you would tell us of the division of fattening in which I am interested — that of chickens; then if there is anything in the other topics that is worth taking into account we may do so.” “Well, under the term poultry are included three kinds of fowl: the barn-yard, the wild, and the African. [2] Barn-yard fowls are the species which are kept continuously in farmsteads. One who wants to set up a poultry-farm of these — that is, wants to gain a large profit by the exercise of knowledge and care, as the Delians generally have done — should observe especially the following five points: purchase, including the breed and number to secure; breeding, including the manner of mating and laying; eggs, including the manner of sitting and hatching; chicks, including the manner of rearing and the birds by which they are reared; and to these is added, as an appendix, the fifth topic — the method of fattening. [3] Of the three species, the proper name for the female of the barn-yard fowl is hen, for the male is cock, while that of the half-males, which have been castrated, is capon. Cocks are castrated, to make them capons, by burning with a red-hot iron at the lowest part of the leg until it bursts; and the sore which results is smeared with potter’s clay. [4] One who intends to have a complete poultry-farm should, of course, procure all three species, but chiefly the barn-yard fowls. In buying these he should choose hens which are prolific, usually of a reddish plumage, with black wing feathers, toes of uneven length, large heads, upright crest, full-bodied, as these are better fitted for laying. [5] Cocks should be amorous; and this is judged from their being muscular, with comb reddish, beak short, wide, and sharp, eyes yellowish or black, wattles red with a trace of white, neck particoloured or golden, thighs feathered, lower leg short, claws long, tail large, feathers thick; also by their stretching and crowing often, being stubborn in a fight — those which not only do not fear animals which attack the hens but even fight for the hens. [6] In choosing a strain, however, it is not well to go after the Tanagrian, Median, or Chalcidian; these are undoubtedly handsome birds and very well fitted for fighting one another, but they are rather poor for laying. If you wish to raise 200 you should assign them an enclosed place, and on it construct two large connecting hen-houses, facing eastward, each about ten feet in length, one-half smaller in width, and a little less in height. In each of these there should be a window three feet wide and one foot higher; these should be made of withes so spaced as to allow plenty of light to enter, and yet to keep from passing through them any of the things which usually injure fowls. [7] Between the two houses there should be a door through which their keeper, the gallinarius, can enter. In the houses should be run a number of

perches sufficient to hold all the hens. Facing the several perches separate nests should be built for them in the wall. In front of it, as I said, should be an enclosed yard, in which they may run during the daytime and dust themselves. In addition there should be a large room for the caretaker to live in, so built that the surrounding walls may be entirely filled with hens' nests, either built in the wall or firmly attached; for movement is^o harmful to a sitting hen. [8] In their nests at laying-time chaff should be spread under them; and when they have laid their eggs, the bedding should be removed and other fresh bedding spread, as in old bedding lice and other vermin generally breed, and these keep the hen from resting quietly, the result being that the eggs either develop unevenly or become stale. If you wish the hen to cover the eggs, it is claimed that a sitting should number not more than 25, even if the hen has been so prolific as to lay more, [9] and that the laying is best from the vernal to the autumnal equinox. So eggs which are laid before or after that period, and even the first laid within the period, should not be set; and the eggs which you set should be put under old hens (and such hens should not have sharp beaks or claws) rather than under pullets, as the latter ought to be busy at laying rather than at sitting. They are best fitted for laying when one or two years old. [10] If you are putting peafowl eggs under a hen, you should put the hen's eggs under her only at the beginning of the tenth day of sitting, so that she will hatch them together; for chicks require twice ten days, and peafowl chicks thrice nine. The hens should be shut up so that they may sit day and night, except at the times morning and evening, when food and drink are being given them. [11] The caretaker should go around at intervals of several days and turn the eggs so that they will warm evenly. It is said that you can tell whether eggs are full and fertile or not if you drop them into water, as the empty egg floats, while the full one sinks. Those who shake an egg to find this out make a mistake, as they break up the vital veins in them. The same authorities state that when you hold it up to the light, the one that the light shines through is infertile. [12] Those who wish to keep eggs a considerable time rub them down thoroughly with fine salt or brine for three or four hours, and when this is washed off pack them in bran or chaff. In setting eggs, care is taken that the number be uneven. The caretaker can find out four days after the sitting begins whether the incubating eggs contain the embryo of a chick. If he holds one against a light and observes it to be uniformly clear, the belief is that it should be thrown out and another substituted. [13] The chicks, when hatched, should be taken from the several nests and placed under a hen which has few chicks; and if a few eggs are left they should be taken away from this hen and put under others which have not yet hatched and those which have fewer than [30] chicks; for the batch must not exceed this number. During the first fifteen days there should be fed to the chicks in the morning, on a bed of dust, so that the hard earth may not injure their beaks, a mixture of barley-meal and cress-seed which has been worked up some time before with water, so that when it is eaten it may not swell up in their crops; and they must be kept away from

water. [14] When they begin to grow feathers from the rump, the lice must be picked from their heads and necks often, for they frequently waste away because of these. Around their houses stag horns should be burned, to keep snakes from coming in; for the smell of these animals is usually fatal to them. They should be driven out into the sunshine and on to the dung-hill so they can flutter about, as in that way they grow healthier — [15] not only the chicks but the whole poultry yard, both in summer and whenever the air is mild and it is sunny, with a net spread above them to keep them from flying outside the enclosure, and to keep hawks and the like from flying into it from outside; avoiding heat and cold, each of which is harmful to them. As soon as they have their wing-feathers they should be trained to follow one or two hens, so that the others may be free for laying rather than busied with the rearing of young. [16] They should begin to sit after the new moon, for the sittings which begin before that time usually do not turn out well. They are hatched in about twenty days. As really too much has been said about these barnyard fowls, I shall make up for it by brevity in speaking of the rest.

“Wild hens are found rarely in town and are hardly seen in Rome, except the tamed ones in cages. In appearance they not like these barn-yard fowls of ours, but rather like the African fowl. [17] Birds whose appearance and shape show that they are of unmixed breed are usually displayed in public ceremonies, along with parrots, white blackbirds, and other unusual things of that sort. Usually they do not produce eggs and chicks in farmsteads, but in the forests. It is from these fowls that the island Gallinaria, in the Tuscan Sea off the coast of Italy opposite the Ligurian mountains, Intimilium, and Album Ingaunum, is said to have got its name; others hold that they are the descendants of those barnyard fowls which were carried there by sailors and became wild. [18] The African hens are large, speckled, with rounded back, and the Greeks call them ‘meleagrides.’ These are the latest fowls to come from the kitchen to the dining-room because of the pampered tastes of people. [19] On account of their scarcity they fetch a high price. Of the three species, it is chiefly the barnyard fowls which are fattened. These are shut into a warm, narrow, darkened place, because movement on their part and light free them from the slavery of fat. For this purpose the largest hens are chosen, but not necessarily those which are mistakenly called “Melic”; for the ancients said “Melic” for “Medic,” just as they said “Thelis” for “Thetis.” Those were called so originally which, because of their size, were imported from Media, and the descendants of these; but later on all large hens got the name on account of their likeness. [20] On these hens the feathers are pulled from wings and tail, and they are fattened on pellets of barley-meal, sometimes mixed with darnel flour, or with flax seed soaked in fresh water. They are fed twice a day, and are watched to see, from certain symptoms, that the last food taken has been digested before more is given. When they have eaten, and their heads have been cleaned to prevent their having lice, they are again shut up. This is continued as long as twenty-five days, and at this time they finally

become fat. [21] Some breeders fatten them also on wheat bread softened in water mixed with a sound, fragrant wine, which results in making them fat and tender within twenty days. If, in the course of the fattening, they lose their appetites from too much food, the amount fed should be lessened, diminishing in the last ten days in the same proportion as it increased in the first ten, so that the twentieth day will be equal to the first. The same method is followed in fattening wood-pigeons and making them plump.”

X.

Transi, inquit Axius, nunc in illud genus, quod non est ulla villa ac terra contentum, sed requirit piscinas, quod vos philograeci vocatis amphibium. In quibus ubi anseres aluntur, nomine alieno chenoboscion appellatis. Horum greges Scipio Metellus et M. Seius habent magnos aliquot. Merula, Seius, inquit, ita greges comparavit anserum, ut hos quinque gradus observaret, quos in gallinis dixi. Hi sunt de genere, de fetura, de ovis, de pullis, de sagina. Primum iubebat servum in legendo observare ut essent ampli et albi, quod plerumque pullos similes sui faciunt. Est enim alterum genus varium, quod ferum vocatur, nec cum iis libenter congregantur, nec aeque fit mansuetum. Anseribus ad admittendum tempus est aptissimum a bruma, ad pariendum et incubandum a Kalendis Februariis vel Martiis usque ad solstitium. Saliunt fere in aqua, iniguntur in flumen aut piscinam. Singulae non plus quam ter in anno pariunt. Singulis, ubi pariant, faciendum haras quadratas circum binos pedes et semipedem; eas substernendum palea. Notandum earum ova aliquo signo, quod aliena non excudunt. Ad incubandum supponunt plerumque novem aut undecim, qui hoc minus, quinque, qui hoc plus, XV. Incubat tempestatibus dies triginta, tepidioribus XXV. Cum excudit, quinque diebus primis patiuntur esse cum matre. Deinde cotidie, serenum cum est, producunt in prata, item piscinas aut paludes, iisque faciunt haras supra terram aut suptus, in quas non inducunt plus vicanos pullos, easque cellas provident ne habeant in solo umorem et ut molle habeant substramen e palea aliave qua re, neve qua eo accedere possint mustelae aliave quae bestiae noceant. Anseres pascunt in umidis locis et pabulum serunt, quod aliquem ferat fructum, seruntque his herbam, quae vocatur seris, quod ea aqua tacta, etiam cum est arida, fit viridis. Folia eius decerpentes dant, ne, si eo inegerint, ubi nascitur, aut obtinendo perdant aut ipsi cruditate pereant; voraces enim sunt natura. Quo temperandum iis, qui propter cupiditatem saepe in pascendo, si radicem prenderunt, quam educere velint e terra, abrumpunt collum; perimbecillum enim id, ut caput molle. Si haec herba non est, dandum hordeum aut frumentum aliud. Cum est tempus farraginis, dandum, ut in seri dixi. Cum incubant, hordeum iis intritum in aqua apponendum. Pullis primum biduo polenta aut hordeum apponitur, tribus proximis nasturtium viride consectum minutatim ex aqua in vas aliquod. Cum autem sunt inclusi in haras aut speluncas, ut dixi, viceni, obiciunt iis polentam hordeaceam aut farraginem herbamve teneram aliquam concisam. Ad saginandum eligunt pullos circiter

sesquimenssem qui sunt nati; eos includunt in saginario ibique polentam et pollinem aqua madefacta dant cibum, ita ut ter die saturent. Secundum cibum large ut bibant faciunt potestatem. Sic curati circiter duobus mensibus fiunt pingues. Quotienscumque sumpeserunt, locus solet purgari, quod amant locum purum neque ipsi ullum, ubi fuerunt, relincunt purum.

[10.1] “Pass on now,” said Axius, “to that kind of fowl which is not content with any farmstead and land, but wants ponds — the kind you Greek-lovers call amphibious. The place where geese are reared you call by the foreign name of chenoboscion. Scipio Metellus and Marcus Seius have several large flocks of geese.” “Seius,” continued Merula, “in making provision for his flocks of geese, observed the five steps which I have described in the case of chickens, and which had to do with strain, mating, eggs, chicks, and fattening. [2] His first injunction to his servant was to see in choosing them that they were full-bodied and white, as usually they have goslings like themselves. For there is another species, mottled, which is called ‘wild,’ and these do not like to flock with the others, and are not tamed so easily. [3] The most suitable time for mating, in the case of geese, is after the winter solstice, for laying and sitting from the first of February or March up to the summer solstice. As they usually mate in the water, they are driven into a stream or a pond. Individuals do not lay more than three times in a year, and when they do, square coops should be built for each, about two and a half feet on each side, and these should be carpeted with straw. Their eggs should be distinguished by some mark, as they do not hatch the eggs of another. Usually nine eggs or eleven form a sitting; if fewer are set, five, if more, fifteen. In cold weather they sit thirty days, in warmer weather twenty-five. [4] When they hatch they are allowed to stay with the mother for the first five days; then they are driven out daily, when the weather is good, into meadows, and also into ponds or swamps. Coops are made for them above ground or under it, and not more than twenty goslings are placed in each; and care is taken that these quarters do not have moisture in the ground, and that they do have a soft cushion of straw or some other material, and that weasels cannot get in, or any other harmful beasts. [5] Geese feed in damp places; so a food is sowed which will bring in a profit, and also there is sowed for them an herb which is called seris, because this, even when it is dry, if touched by water becomes green. The leaves of this are plucked and fed to them, for if they are driven into the place where it is growing they either ruin it by their trampling or die from over-eating; for they are naturally ravenous. For this reason you must restrain them, for, as often happens in their feeding because of their greed, if they catch hold of a root which they want to pull out of the ground, they break their necks; for the neck is exceedingly weak, just as the head is soft. If there is none of this herb, they should be fed on barley or other grain. When the season for mixed forage comes, this should be fed as I said in regard to seris. [6] While the geese are sitting they should be fed on barley soaked in water. The goslings are fed first on barley-meal or barley for two days, and for the next three on green cress cut fine, soaked in

water and turned into a vessel. But after they are shut into the coops or the underground nests, twenty to the nest, as I have said, they are fed on ground barley or mixed forage or tender grass cut fine. [7] For fattening, goslings are chosen which are about one and one-half months old; these are enclosed in the fattening pen, and there they are fed on a food consisting of barley-meal and flour dampened with water, being surfeited three times a day. After eating, they are allowed the opportunity of drinking as much as they want. When they are treated in this way they become fat in about two months. After every feeding the place is cleaned out; for they like a clean place, and yet never leave any place clean where they have been.

XI.

Qui autem volunt greges anatum habere ac constituere nessotrophion, primum locum, quoi est facultas, eligere oportet palustrem, quod eo maxime delectantur; si id non, potissimum ibi, ubi sit naturalis aut lacus aut stagnum aut manu facta piscina, quo gradatim descendere possint. Saeptum altum esse oportet, ubi versentur, ad pedes quindecim, ut vidistis ad villam Sei, quod uno ostio claudatur. Circum totum parietem intrinsecus crepido lata, in qua secundum parietem sint tecta cubilia, ante ea vestibulum earum exaequatum tectorio opere testaceo. In eo perpetua canalis, in quam et cibus imponitur iis et immittitur aqua; sic enim cibum capiunt. Omnes parietes tectorio levigantur, ne faeles aliave quae bestia introire ad nocendum possit, idque saeptum totum rete grandibus maculis integitur, ne eo involare aquila possit neve evolare anas. Pabulum iis datur triticum, hordeum, vinacei, non numquam etiam ex aqua cammari et quaedam eius modi aquatilia. Quae in eo saepto erunt piscinae, in eas aquam large influere oportet, ut semper recens sit.

Sunt item non dissimilia alia genera, ut querquedulae, phalarides, sic perdices, quae, ut Archelaus scribit, voce maris audita concipiunt. Quae, ut superiores, neque propter fecunditatem neque propter suavitatem saginantur et sic pascendo fiunt pingues. Quod ad villaticarum pastionum primum actum pertinere sum ratus, dixi.

[11.1] "One who wishes to keep flocks of ducks and build a duck-farm should choose, first, if he has the opportunity, a place which is swampy, for they like this best of all; if this is not available, a place preferably where there is a natural pond or pool or an artificial pond, to which they can go down by steps.

[2] There should be an enclosure in which they can move about, some fifteen feet high, as you saw at Seius's place, closed by one entrance. Around the entire wall on the inside should run a wide ledge, along which, next to the wall, are the covered resting places, and in front of them their vestibule levelled with plastered brickwork. In this is a continuous trough, in which food is placed for them and water is admitted; for in this way they take their food. [3] All the walls are smoothed with plaster, so that no weasel or other

beast can get in to harm them; and the entire enclosure is covered with a wide-meshed net, so that an eagle cannot fly in or the ducks fly out. For food they are often given wheat, barley, grape-skins, and sometimes water-crabs and certain aquatic food of that sort. Any ponds in the enclosure should have a large inflow of water, so that it may always be fresh.

[4] “There are also other species not unlike them, such as the teal, coot, and partridge, which, as Archelaus writes, conceive when they hear the voice of the male. These are not stuffed as are those above mentioned, either to increase their fecundity or to improve their flavour, but they become fat by merely feeding them as described. I have finished telling what seems to belong to the first act of the husbandry of the steading.”

XII.

Interea redit Appius, et percontati nos ab illo et ille a nobis, quid esset dictum ac factum. Appius, Sequitur, inquit, actus secundi generis adfecticius ad villam qui solet esse, ac nomine antico a parte quadam leporarium appellatum. Nam neque solum lepores in eo includuntur silva, ut olim in iugero agelli aut duobus, sed etiam cervi aut caprae in iugeribus multis. Quintus Fulvius Lippinus dicitur habere in Tarquiniensi saepta iugera quadraginta, in quo sunt inclusa non solum ea quae dixi, sed etiam oves ferae, etiam hoc maius hic in Statoniensi et quidam in locis aliis; in Gallia vero transalpina T. Pompeius tantum saeptum venationis, ut circiter passum locum inclusum habeat. Praeterea in eodem consaepto fere habere solent cocliaria atque alvaria atque etiam dolia, ubi habeant conclusos glires. Sed horum omnium custodia, incrementum et pastio aperta, praeterquam de apibus. Quis enim ignorat saepta e maceriis ita esse oportere in leporario, ut tectorio tacta sint et sint alta? Alterum ne faelis aut maelis aliave quae bestia introire possit, alterum ne lupo transilire; ibique esse latebras, ubi lepores interdum delitiscant in virgultis atque herbis, et arbores patulis ramis, quae aquilae impediunt conatus. Quis item nescit, paucos si lepores, mares ac feminas, intromiserit, brevi tempore fore ut impleatur? Tanta fecunditas huius quadrupedis. Quattuor modo enim intromisit in leporarium, brevi solet repleti. Etenim saepe, cum habent catulos recentes, alios in ventre habere reperiuntur. Itaque de iis Archelaus scribit, annorum quot sit qui velit scire, inspicere oportere foramina naturae, quod sine dubio alius alio habet plura. Hos quoque nuper institutum ut saginarent plerumque, cum exceptos e leporario condant in caveis et loco clauso faciant pingues. Quorum ergo tria genera fere sunt: unum Italicum hoc nostrum pedibus primis humilibus, posterioribus altis, superiore parte pulla, ventre albo, auribus longis. Qui lepus dicitur, cum praegnas sit, tamen concipere. In Gallia Transalpina et Macedonia fiunt permagni, in Hispania et in Italia mediocres. Alterius generis est, quod in Gallia nascitur ad Alpem, qui hoc fere mutant, quod toti candidi sunt; ii raro perferuntur Romam. Tertii generis est, quod in Hispania nascitur, similis nostro lepori ex quadam parte,

sed humile, quem cuniculum appellant. L. Aelius putabat ab eo dictum leporem a celeritudine, quod levipes esset. Ego arbitror a Graeco vocabulo antico, quod eum Aeolis leporin appellabant. Cuniculi dicti ab eo, quod sub terra cuniculos ipsi facere solent, ubi lateant in agris. Horum omnium tria genera, si possis, in leporario habere oportet. Duo quidem utique te habere puto, quod in Hispania annis ita fuisti multis, ut inde te cuniculos persecutos credam.

[12.1] Meanwhile Appius returns, and we are asked by him and he by us what has been said and done. Appius continues: “There follows the second act, which is usually an appendage to the villa and retains its old name of hare-warren because of one part of it — for not only are hares enclosed in it in woods, as used to be the case on an acre or two of land, but also stags and roes on many acres. It is reported that Quintus Fulvius Lippinus has a preserve in the vicinity of Tarquinii of forty iugera, in which are enclosed, not only the animals I have named, but also wild sheep; and an even larger one near Statonia, and some in other places; [2] while in Transalpine Gaul, Titus Pompeius has a hunting preserve so large that he keeps a tract of about four square miles enclosed. In addition to this, in the same enclosure are usually kept places for snails and bee-hives, and also casks in which dormice are kept confined. But the care, increase, and feeding of all these, except the bees, is evident. [3] For everybody knows that walled enclosures in warrens ought to be covered with plaster and ought to be high — in the one case to make it impossible for a weasel or a badger or other animal to enter, and in the other to keep a wolf from leaping over; and they should have coverts in which the hares may hide in the day-time under the brush and grass, and trees with spreading branches to hinder the swooping of an eagle. [4] Who also does not know that if he points in a few hares, male and female, in a short time the place will be filled? Such is the fecundity of this animal. For place only four in a warren and it is usually filled in a short time; for often, while they have a young litter they are found to have others in the womb. And so Archelaus writes of them that one who wishes to know how old they are should examine the natural openings, for undoubtedly one has more than another. [5] There is a recent practice of fattening these, too, by taking them from the warren and shutting them up in hutches and fattening them in an enclosed space. There are, then, some three species of these: one, this Italian species of ours, with short fore-legs and long hind legs, the upper part of the body dark, belly white, and ears long. This hare is said to conceive even while it is pregnant. In Transalpine Gaul and Macedonia they grow very large; in Spain and in Italy they are medium-sized. [6] Belonging to the second species is the hare which is born in Gaul near the Alps, which usually differs in the fact that it is entirely white; these are not often brought to Rome. To the third species belongs the one which is native to Spain — like our hare in some respects, but with short legs — which is called cony. Lucius Aelius thought that the hare received its name lepus because of its swiftness, being levipes, nimble-foot. My own

opinion is that it comes from an old Greek word, as the Aeolians called it λέπορις. The conies are so named from the fact that they have a way of making in the fields tunnels (cuniculos) in which to hide. [7] You should have all these three species in your warren if you can. You surely have two species anyway, I suppose, as you were in Spain for so many years that I imagine the conies followed you all the way from there.

XIII.

Apros quidem posse haberi in leporario nec magno negotio ibi et captivos et cicuris, qui ibi nati sint, pingues solere fieri scis, inquit, Axi. Nam quem fundum in Tusculano emit hic Varro a M. Pupio Pisone, vidisti ad bucinam inflatam certo tempore apros et capreas convenire ad pabulum, cum ex superiore loco e palaestra apris effunderetur glans, capreis victa aut quid aliud. Ego vero, inquit ille, apud Q. Hortensium cum in agro Laurenti essem. Ibi istuc magis thraikikos fieri vidi. Nam silva erat, ut dicebat, supra quinquaginta iugerum maceria saepta, quod non leporarium, sed therotrophium appellabat. Ibi erat locus excelsus, ubi triclinio posito cenabamus, quo Orpheia vocari iussit. Qui cum eo venisset cum stola et cithara cantare esset iussus, bucina inflavit, ut tanta circumfluxerit nos cervorum aprorum et ceterarum quadripedum multitudo, ut non minus formosum mihi visum sit spectaculum, quam in Circo Maximo aedilium sine Africanis bestiis cum fiunt venationes.

[13.1] “You know, Axis,” Appius continued, “that boars can be kept in the warren with no great trouble; and that both those that have been caught and the tame ones which are born there commonly grow fat in them. For on the place that our friend Varro here bought from Marcus Pupius Piso near Tusculum, you saw wild boars and roes gather for food at the blowing of a horn at a regular time, when mast was thrown from a platform above to the boars, and vetch or the like to the roes.” [2] “Why,” said he, “I saw it carried out more in the Thracian fashion at Quintus Hortensius’s place near Laurentum when I was there. For there was a forest which covered, he said, more than fifty iugera; it was enclosed with a wall and he called it, not a warren, but a game-preserve. In it was a high spot where was spread the table at which we were dining, to which he bade Orpheus be called. [3] When he appeared with his robe and harp, and was bidden to sing, he blew a horn; whereupon there poured around us such a crowd of stags, boars, and other animals that it seemed to me to be no less attractive a sight than when the hunts of the aediles take place in the Circus Maximus without the African beasts.”

XIV.

Axis, Tuas partes, inquit, sublevavit Appius, O Merula noster. Quod ad venationem pertinet, breviter secundus trasactus est actus, nec de cochleis ac gliribus quaero, quod relicum est; neque enim magnum molimentum esse

potest. Non istuc tam simplex est, inquit Appius, quam tu putas, O Axi noster. Nam et idoneus sub dio sumendus locus cochleariis, quem circum totum aqua claudas, ne, quas ibi posueris ad partum, non liberos earum, sed ipsas quaeras. Aqua, inquam, finiendae, ne fugitivarius sit parandus. Locus is melior, quem et non coquit sol et tangit ros. Qui si naturalis non est, ut fere non sunt in aprico loco, neque habeas in opaco ubi facias, ut sunt sub rupibus ac montibus, quorum adluant radices lacus ac fluvii, manu facere oportet roscidum. Qui fit, si adduxeris fistula et in eam mammillas imposueris tenues, quae eructent aquam, ita ut in aliquem lapidem incidat ac late dissipetur. Parvus iis cibus opus est, et is sine ministratore, et hunc, dum serpit, non solum in area reperit, sed etiam, si rivus non prohibet, parietes stantes invenit. Denique ipsae et ruminantes ad propolam vitam diu producunt, cum ad eam rem pauca laurea folia intericiant et aspergant furfures non multos. Itaque cocus has vivas an mortuas coquat, plerumque nescit. Genera cochlearum sunt plura, ut minutae albulae, quae afferuntur e Reatino, et maximae, quae de Illyrico apportantur, et mediocres, quae ex Africa afferuntur; non quo non in his regionibus quibusdam locis ac magnitudinibus sint disperiles; nam et valde amplae sunt ex Africa, quae vocantur solitannae, ita ut in eas LXXX quadrantes coici possint, et sic in aliis regionibus eadem inter se collatae minores ac maiores. Hae in fetura pariunt innumerabilia. Earum semen minutum ac testa molli diuturnitate obdurescit. Magnis insulis in areis factis magnum bolum deferunt aeris. Has quoque saginare solent ita, ut ollam cum foraminibus incrustent sapa et farri, ubi pascantur, quae foramina habeat, ut intrare aer possit; vivax enim haec natura.

[14.1] “Appius has lightened your task, my dear Merula,” said Axius. “So far as game is concerned, the second act has been completed briefly; and I do not ask for the rest of it — snails and dormice — as that cannot be a matter of great effort.” “The thing is not so simple as you think, my dear Axius,” replied Appius. “You must take a place fitted for snails, in the open, and enclose it entirely with water; for if you do not, when you put them to breed it will not be their young which you have to search for, but the old snails. [2] They have to be shut in, I repeat, with water, so that you need not get a runaway-catcher. The best place is one which the sun does not parch, and where the dew falls. If there is no such natural place — and there usually is not in sunny ground — and you have no place where you can build one in the shade, as at the foot of a cliff or a mountain with a pool or stream at the bottom, you should make an artificially dewy one. This can be done if you will run a pipe and attach to it small teats to squirt out the water in such a way that it will strike a stone and be scattered widely in a mist. [3] They need little food, and require no one to feed them; they get their food, not only in the open while crawling around, but even discover any upright walls, if the stream does not prevent. In fact, even at the dealer’s they keep alive for a long time by chewing the cud, a few laurel leaves being thrown them for the purpose, sprinkled with a little bran. Hence the cook usually doesn’t know whether they are alive or dead when he is

cooking them. [4] There are several varieties of snails, such as the small whites, which come from Reate, the large-sized, which are brought from Illyricum, and the medium-sized, which come from Africa. Not that they do not vary in these regions in distribution and size; thus, very large ones do come from Africa — the so-called *solitannae* — so large that 80 quadrantes can be put into their shells; and so in other countries the same species are relatively larger or smaller. [5] They produce innumerable young; these are very small and with a soft shell, but it hardens with time. If you build large islands in the yards, they will bring in a large haul of money. Snails, too, are often fattened as follows: a jar for them to feed in, containing holes, is lined with must and spelt — it should contain holes in order to allow the air to enter, for the snail is naturally hardy.

XV.

Glirarium autem dissimili ratione habetur, quod non aqua, sed maceria locus saepitur; tota levi lapide aut tectorio intrinsecus incrustatur, ne ex ea erepere possit. In eo arbusculas esse oportet, quae ferant glandem. Quae cum fructum non ferunt, intra maceriem iacere oportet glandem et castaneam, unde saturi fiant. Facere iis cavos oportet laxiores, ubi pullos parere possint; aquam esse tenuem, quod ea non utuntur multum et aridum locum quaerunt. Hae saginantur in doliis, quae etiam in villis habent multi, quae figuli faciunt multo aliter atque alia, quod in lateribus eorum semitas faciunt et cavum, ubi cibum constituent. In hoc dolium addunt glandem aut nuces iuglandes aut castaneam. Quibus in tenebris cum operculum impositum est in doleis, fiunt pingues.

[15.1] “The place for dormice is built on a different plan, as the ground is surrounded not by water but by a wall, which is covered on the inside with smooth stone or plaster over the whole surface, so that they cannot creep out of it. In this place there should be small nut-bearing trees; when they are not bearing, acorns and chestnuts should be thrown inside the walls for them to glut themselves with. [2] They should have rather roomy caves built for them in which they Campagna bring forth their young; and the supply of water should be small, as they do not use much of it, but prefer a dry place. They are fattened in jars, which many people keep even inside the villa. The potters make these jars in a very different form from other jars, as they run channels along the sides and make a hollow for holding the food. In such a jar acorns, walnuts, or chestnuts are placed; and when a cover is placed over the jars they grow fat in the dark.”

XVI.

Appius, Igitur relinquitur, inquit, de pastione villatica tertius actus de piscinis. Quid tertius? inquit Axius. An quia tu solitus es in adulescentia tua domi mulsum non bibere propter parsimoniam, nos mel neclegemus? Appius nobis,

Verum dicit, inquit. Nam cum pauper cum duobus fratribus et duabus sororibus essem relictus, quarum alteram sine dote dedi Lucullo, a quo hereditate me cessa primum et primus mulsum domi meae bibere coepi ipse, cum interea nihilo minus paene cotidie in convivio omnibus daretur mulsum. Praeterea meum erat, non tuum, eas novisse volucres, quibus plurimum natura ingeni atque artis tribuit. Itaque eas melius me nosse quam te ut scias, de incredibili earum arte naturali audi. Merula, ut cetera fecit, historicos quae sequi melitturgoe soleant demonstrabit.

Primum apes nascuntur partim ex apibus, partim ex bubulo corpore putrefacto. Itaque Archelaus in epigrammate ait eas esse

boos phthimenes peplanemena tekna,

idem

hippon men sphekes genea, moschon de melissai.

Apes non sunt solitaria natura, ut aquilae, sed ut homines. Quod si in hoc faciunt etiam graculi, at non idem, quod hic societas operis et aedificiorum, quod illic non est, hic ratio atque ars, ab his opus facere discunt, ab his aedificare, ab his cibaria condere. Tria enim harum: cibus, domus, opus, neque idem quod cera cibus, nec quod mel, nec quod domus. Non in favo sex angulis cella, totidem quot habet ipsa pedes? Quod geometrae hexagonon fieri in orbi rutundo ostendunt, ut plurimum loci includatur. Foris pascuntur, intus opus faciunt, quod dulcissimum quod est, et deis et hominibus est acceptum, quod favus venit in altaria et mel ad principia convivi et in secundam mensam administratur. Haec ut hominum civitates, quod hic est et rex et imperium et societas. Secuntur omnia pura. Itaque nulla harum adsidit in loco inquinato aut eo qui male oleat, neque etiam in eo qui bona olet unguenta. Itaque iis unctus qui accessit, pungunt, non, ut muscae, ligurriunt, quod nemo has videt, ut illas, in carne aut sanguine aut adipe. Ideo modo considunt in eis quorum sapor dulcis. Minime malefica, quod nullius opus vellicans facit deterius, neque ignava, ut non, qui eius conetur disturbare, resistat; neque tamen nescia suae imbecillitatis. Quae cum causa Musarum esse dicuntur volucres, quod et, si quando displicatae sunt, cymbalis et plausibus numero redducunt in locum unum; et ut his dis Helicon atque Olympon adtribuerunt homines, sic his floridos et incultos natura adtribuit montes. Regem suum secuntur, quocumque it, et fessum sublevant, et si nequit volare, succollant, quod eum servare volunt. Neque ipsae sunt inficientes nec non oderunt inertes. Itaque insectantes ab se eiciunt fucos, quod hi neque adjuvant et mel consumunt, quos vocificantes plures persecuntur etiam paucae. Extra ostium alvi opturant omnia, qua venit inter favos spiritus, quam erithacen appellant Graeci. Omnes ut in exercitu vivunt atque alternis dormiunt et opus faciunt pariter et ut colonias mittunt, iique duces conficiunt quaedam ad vocem ut imitatione tubae. Tum id faciunt, cum inter se signa pacis ac belli habeant. Sed, O

Merula, Axius noster ne, dum haec audit physica, macescat, quod de fructu nihil dixi, nunc cursu lampada tibe trado.

Merula, De fructu, inquit, hoc dico, quod fortasse an tibi satis sit, Axi, in quo auctorem habeo non solum Seium, qui alvaria sua locata habet quotannis quinis milibus pondo mellis, sed etiam hunc Varronem nostrum, quem audivi dicentem duo milites se habuisse in Hispania fratres Veianos ex agro Falisco locupletis, quibus cum a patre relicta esset parva villa et agellus non sane maior iugero uno, hos circum villam totam alvaria fecisse et hortum habuisse ac relicum thymo et cytiso opsevisse et apiastro, quod alii meliphyllon, alii melissophyllon, quidam melittaenam appellant. Hos numquam minus, ut peraeque ducerent, dena milia sestertia ex melle recipere esse solitos, cum dicerent velle exspectare, ut suo potius tempore mercatorem admitterent, quam celerius alieno. Dic igitur, inquit, ubi et cuius modi me facere oporteat alvarium, ut magnos capiam fructus. Ille, melittonas ita facere oportet, quos alii melitrophia appellant, eandem rem quidam mellaria. Primum secundum villam potissimum, ubi non resonent imagines (hic enim sonus harum fugae existimatur esse protelum), esse oportet aere temperato, neque aestate fervido neque hieme non aprico, ut spectet potissimum ad hibernos ortus, qui prope se loca habeat ea, ubi pabulum sit frequens et aqua pura. Si pabulum naturale non est, ea oportet dominum serere, quae maxime secuntur apes. Ea sunt rosa, serpyllon, apiastrum, papaver, faba, lens, pisum, ocimum, cyperum, medice, maxime cytisum, quod minus valentibus utilissimum est. Etenim ab aequinoctio verno florere incipit et permanet ad alterum aequinoctium. Sed ut hoc aptissimum ad sanitatem apium, sic ad mellificium thymum. Propter hoc Siculum mel fert palmam, quod ibi thymum bonum frequens est. Itaque quidam thymum contundunt in pila et diluunt in aqua tepida; eo conspergunt omnia seminaria consita apium causa. Quod ad locum pertinet, hoc genus potissimum eligendum iuxta villam, non quo non in villae porticu quoque quidam, quo tutius esset, alvarium collocarint. Ubi sint, alii faciunt ex viminibus rutundas, alii e ligno ac corticibus, alii ex arbore cava, alii fictiles, alii etiam ex ferulis quadratas longas pedes circiter ternos, latas pedem, sed ita, ubi parum sunt quae compleant, ut eas conangustent, in vasto loco inani ne despondeant animum. Haec omnia vocant a mellis alimonio alvos, quas ideo videntur medias facere angustissimas, ut figuram imitentur earum. Vitiles fimo bubulo oblinunt intus et extra, ne asperitate absterreantur, easque alvos ita collocant in mutulis parietis, ut ne agitentur neve inter se contingant, cum in ordinem sint positae. Sic intervallo interposito alterum et tertium ordinem infra faciunt et aiunt potius hinc demi oportere, quam addi quartum. Media alvo, qua introeant apes, faciunt foramina parva dextra ac sinistra. Ad extremam, qua mellarii favum eximere possint, opercula imponunt. Alvi optimae fiunt corticeae, deterrimae fictiles, quod et frigore hieme et aestate calore vehementissime haec commoventur. Verno tempore et aestivo fere ter in mense mellarius inspicere debet fumigans leniter eas et ab spurcitiis purgare alvum et vermiculos eicere. Praeterea ut animadvertat ne reguli plures

existant; inutiles enim fiunt propter seditiones. Et quidam dicunt, tria genera cum sint ducum in apibus, niger ruber varius, ut Menecrates scribit, duo, niger et varius, qui ita melior, ut expediat mellario, cum duo sint in eadem alvo, interficere nigrum, cum sit cum altero rege, esse seditiosum et corrumpere alvom, quod fuget aut cum multitudine fugetur. De reliquis apibus optima est parva varia rutunda. Fur qui vocabitur, ab aliis fucus, est ater et lato ventre. Vespa, quae similitudinem habet apis, neque socia est operis et nocere solet morsu, quam apes a se secernunt. Hae differunt inter se, quod ferae et cicures sunt. Nunc feras dico, quae in silvestribus locis pascunt, cicures, quae in cultis. Silvestres minores sunt magnitudine et pilosae, sed opifices magis.

In emendo emptorem videre oportet, valeant an sint aegrae. Sanitatis signa, si sunt frequentes in examine et si nitidae et si opus quod faciunt est aequabile ac leve. Minus valentium signa, si sunt pilosae et horridae, ut pulverulentae, nisi opificii eas urget tempus; tum enim propter laborem asperantur ac marcescunt. Si transferendae sunt in alium locum, id facere diligenter oportet et tempora, quibus id potissimum facias, animadvertendum et loca, quo transferas, idonea providendum: tempora, ut verno potius quam hiberno, quod hieme difficulter consuescunt quo translatae manere, itaque fugiunt plerumque. Si e bono loco transtuleris eo, ubi idonea pabulatio non sit, fugitivae fiunt. Nec, si ex alvo in alvum in eodem loco traicias, neglegenter faciendum, sed et in quam transiturae sint apes, ea apiastro perfricanda, quod inlicium hoc illis, et favi melliti intus ponendi a faucibus non longe, ne, cum animadverterint aut inopiam esse * * * habuisse dicit. Is ait, cum sint apes morbidae propter primoris vernos pastus, qui ex floribus nucis graecae et cornus fiunt, coeliacas fieri atque urina pota reficiendas. Propolim vocant, e quo faciunt ad foramen introitus protectum ante alvum maxime aestate. Quam rem etiam nomine eodem medici utuntur in emplastris, propter quam rem etiam carius in sacra via quam mel venit. Erithacen vocant, quo favos extremos inter se conglutinant, quod est aliud melle et propoli; itaque in hoc vim esse illiciendi. Quocirca examen ubi volunt considerare, eum ramum aliamve quam rem oblinunt hoc admixto apiastro. Favus est, quem fingunt multicavatum e cera, cum singula cava sena latera habeant, quot singulis pedes dedit natura. Neque quae afferunt ad quattuor res faciendas, propolim, erithacen, favum, mel, ex iisdem omnibus rebus carpere dicunt. Simplex, quod e malo punico et asparago cibum carpant solum, ex olea arbore ceram, e fico mel, sed non bonum. Duplex ministerium praebere, ut e faba, apiastro, cucurbita, brassica ceram et cibum; nec non aliter duplex quod fit e malo et piris silvestribus, cibum et mel; item aliter duplex quod e papavere, ceram et mel. Triplex ministerium quoque fieri, ut ex nuce Graeca et e lapsano cibum, mel, ceram. Item ex aliis floribus ita carpere, ut alia ad singulas res sumant, alia ad plures, nec non etiam aliud discrimen sequantur in captura aut eas sequatur, ut in melle, quod ex alia re faciant liquidum mel, ut e siserae flore, ex alia contra spissum, ut e rore marino; sic ex alia re, ut e fico mel insuave, e cytiso bonum, e thymo optimum. Cibi pars quod potio et ea iis aqua liquida,

unde bibant esse oportet, eamque propinquam, quae praeterfluat aut in aliquem lacum influat, ita ut ne altitudine escendat duo aut tres digitos; in qua aqua iaceant testae aut lapilli, ita ut exstent paulum, ubi adsidere et bibere possint. In quo diligenter habenda cura ut aqua sit pura, quod ad mellificium bonum vehementer prodest. Quod non omnis tempestas ad pastum prodire longius patitur, praeparandus his cibus, ne tum melle cogantur solo vivere aut relinquere exinanitas alvos. Igitur ficorum pinguium circiter decem pondo decoquunt in aquae congiis sex, quas coctas in offas prope apponunt. Alii aquam mulsam in vasculis prope ut sit curant, in quae addunt lanam puram, per quam sugant, uno tempore ne potu nimium impleantur aut ne incidant in aquam. Singula vasa ponunt ad alvos, haec supplentur. Alii uvam passam et ficum cum pisierunt, affundunt sapam atque ex eo factas offas apponunt ibi, quo foras hieme in pabulum procedere tamen possint.

Cum examen exiturum est, quod fieri solet, cum adnae prospere sunt multae ac progeniem ut coloniam emittere volunt, ut olim crebro Sabini factitaverunt propter multitudinem liberorum, huius quod duo solent praeire signa, scitur: unum, quod superioribus diebus, maxime vespertinis, multae ante foramen ut uvae aliae ex aliis pendent conglobatae; alterum, quod, cum iam evoluturae sunt aut etiam inceperunt, consonant vehementer, proinde ut milites faciunt, cum castra movent. Quae primum exierunt, in conspectu volitant reliquas, quae nondum congregatae sunt, respectantes, dum convenient. A mellario cum id fecisse sunt animadversae, iaciundo in eas pulvere et circumtinniendo aere perterritae, quo volunt perducere, non longe inde oblinunt erithace atque apiastro ceterisque rebus, quibus delectantur. Ubi consederunt, afferunt alvum eisdem inliciis litam intus et prope apposita fumo leni circumdato cogunt eas intrare. Quae in novam coloniam cum introierunt, permanent adeo libenter, ut etiam si proximam posueris illam alvum, unde exierunt, tamen novo domicilio potius sint contentae.

Quod ad pastiones pertinere sum ratus quoniam dixi, nunc iam, quoniam causa adhibetur ea cura, de fructu dicam. Eximendorum favorum signum sumunt ex ipsis uiris alvos habeat nem congerminarit coniecturam capiunt, si intus faciunt bombum et, cum intro eunt ac foras, trepidant et si, opercula alvorum cum remoris, favorum foramina obducta videntur membranis, cum sint repleti melle. In eximendo quidam dicunt oportere ita ut novem partes tollere, decumam relinquere; quod si omne eximas, fore ut discedant. Alii hoc plus relinquant, quam dixi. Ut in aratis qui faciunt restibiles segetes, plus tollunt frumenti ex intervallis, sic in alvis, si non quotannis eximas aut non aequae multum, et magis his assiduas habeas apes et magis fructuosas. Eximendorum favorum primum putant esse tempus vergiliarum exortu, secundum aestate acta, antequam totus exoriatur arcturus, tertium post vergiliarum occasum, et ita, si fecunda sit alvos, ut ne plus tertia pars eximatur mellis, reliquum ut himationi relinquatur; sin alvus non sit fertilis, ne quid eximatur. Exemptio cum est maior, neque universam neque palam facere oportet, ne deficiant

animum. Favi qui eximuntur, siqua pars nihil habet aut habet incunatum, cultello praesicatur. Providendum ne infirmiores a valentioribus opprimantur, eo enim minuitur fructus; itaque imbecilliores secretas subiciunt sub alterum regem. Quae crebrius inter se pugnabant, aspargi eas oportet aqua mulsa. Quo facto non modo desistunt pugna, sed etiam conferciunt se lingentes, eo magis, si mulso sunt asparsae, quo propter odorem avidius applicant se atque obstupescunt potantes. Si ex alvo minus frequentes evadunt ac subsidit aliqua pars, subfumigandum et prope apponendum bene olentium herbam maxime apiastrum et thymum. Providendum vehementer ne propter aestum aut propter frigus dispereant. Si quando subito imbri in pastu sunt oppressae aut frigore subito, antequam ipsae providerint id fore, quod accidit raro ut decipiantur, et imbris guttis uberibus offensae iacent prostratae, ut efflictae, colligendum eas in vas aliquod et reponendum in tecto loco ac tepido, proximo die quam maxime tempestate bona cinere facto e ficulneis lignis infriandum paulo plus caldo quam tepidiore. Deinde concutiendum leviter ipso vaso, ut manu non tangas, et ponendae in sole. Quae enim sic concaluerunt, restituunt se ac revivescunt, ut solet similiter fieri in muscis aqua necatis. Hoc faciendum secundum alvos, ut reconciliatae ad suum quaeque opus et domicilium redeant.

[16.1] “Well,” remarked Appius, “the third act of the husbandry of the steading is left — fishponds.” “Why third?” inquired Axius. “Or, just because you were accustomed in your youth not to drink honey-wine at home for the sake of thrift, are we to overlook honey?” “It is the truth he is telling,” Appius said to us. [2] “For I was left in straitened circumstances, together with two brothers and two sisters, and gave one of them to Lucullus without a dowry; it was only after he relinquished a legacy in my favour that I, for the very first time, began to drink honey-wine at home myself, though meantime mead was none the less commonly served at banquets almost daily to all guests. [3] And furthermore, it was my right and not yours to know these winged creatures, to whether nature has given so much talent and art. And so, that you may realize that I know bees better than you do, hear of the incredible art that nature has given them. Our well-versed Merula, as he has done in other cases, will tell you of the practice followed by bee-keepers.

[4] “In the first place, bees are produced partly from bees, and partly from the rotted carcass of a bullock. And so Archelaus, in an epigram, says that they are ‘the roaming children of a dead cow’; and the same writer says: ‘While wasps spring from horses, bees come from calves.’ Bees are not of a solitary nature, as eagles are, but are like human beings. Even if jackdaws in this respect are the same, still it is not the same case; for in one there is a fellowship in toil and in building which does not obtain in the other; in the one case there is reason and skill — it is from these that men learn to toil, to build, to store up food. [5] They have three tasks: food, dwelling, toil; and the food is not the same as the wax, nor the honey, nor the dwelling. Does not the

chamber in the comb have six angles, the same number as the bee has feet? The geometricians prove that this hexagon inscribed in a circular figure encloses the greatest amount of space. They forage abroad, and within the hive they produce a substance which, because it is the sweetest of all, is acceptable to gods and men alike; for the comb comes to the altar and the honey is served at the beginning of the feast and for the second table. [6] Their commonwealth is like the states of men, for here are king, government, and fellowship. They seek only the pure; and hence no bee alights on a place which is befouled or one which has an evil odour, or even one which smells of sweet perfume. So one who approaches them smelling of perfume they sting, and do not, as flies do, lick him; and one never sees bees, as he does flies, on flesh or blood or fat — so truly do they alight only on objects which have a sweet savour. [7] The bee is not in the least harmful, as it injures no man's work by pulling it apart; yet it is not so cowardly as not to fight anyone who attempts to break up its own work; but still it is well aware of its own weakness. They are with good reason called 'the winged attendants of the Muses,' because if at any time they are scattered they are quickly brought into one place by the beating of cymbals or the clapping of hands; and as man has assigned to those divinities Helicon and Olympus, so nature has assigned to the bees the flowering untilled mountains. [8] They follow their own king where he goes, assist him when weary, and if he is unable to fly they bear him upon their backs, in their eagerness to serve him. They are themselves not idle, and detest the lazy; and so they attack and drive out from them the drones, as these give no help and eat the honey, and even a few bees chase larger numbers of drones in spite of their cries. On the outside of the entrance to the hive they seal up the apertures through which the air comes between the combs with a substance which the Greeks call erithace. They all live as if in an army, sleeping and working regularly in turn, and send out as it were colonies, and their leaders give certain orders with the voice, as it were in imitation of the trumpet, as happens when they have signals of peace and war with one another. But, my dear Merula, that our friend Axius may not waste away while hearing this essay on natural history, in which I have made no mention of gain, I hand over to you the torch in the race."

[10] Whereupon Merula: "As to the gain I have this to say, which will perchance be enough for you, Axius, and I have as my authorities not only Seius, who has his apiaries let out for an annual rental of 5,000 pounds of honey, but also our friend Varro here. I have heard the latter tell the story that he had two soldiers under him in Spain, brothers named Veianius, from the district near Falerii. They were well-off, because, though their father had left only a small villa and a bit of land certainly not larger than one iugerum, they had built an apiary entirely around the villa, and kept a garden; and all the rest of the land had been planted in thyme, snail-clover, and balm — a plant which some call honey-leaf, others bee-leaf, and some call bee-herb. [11] These men never received less than 10,000 sesterces from their honey, on a conservative

estimate, as they said they preferred to wait until they could bring in the buyer at the time they wanted rather than to rush into market at an unfavourable time.” “Tell me, then,” said he, “where I ought to build an apiary and of what sort, so as to get a large profit.” [12] “The following,” said Merula, “is the proper method for building apiaries, which are variously called *melitrophia* and *mellaria*: first, they should be situated preferably near the villa, but where echoes do not resound (for this sound is thought to be a signal for flight in their case); where the air is temperate, not too hot in summer, and not without sun in winter; that it preferably face the winter sunrise, and have near by a place which has a good supply of food and clear water. [13] If there is no natural food, the owner should sow crops which are most attractive to bees. Such crops are: the rose, wild thyme, balm, poppy, bean, lentil, pea, clover, rush, alfalfa, and especially snail-clover, which is extremely wholesome for them when they are ailing. It begins flowering at the vernal equinox and continues until the second equinox. [14] But while this is most beneficial to the health of bees, thyme is best suited to honey-making; and the reason that Sicilian honey bears off the palm is that good thyme is common there. For this reason some bruise thyme in a mortar and soak it in lukewarm water, and with this sprinkle all the plots planted for the bees. [15] So far as the situation is concerned, one should preferably be chosen close to the villa — and some people place the apiary actually in the portico of the villa, so that it may be better protected. Some build round hives of withes for the bees to stay in, others of wood and bark, others of a hollow tree, others build of earthenware, and still others fashion them of fennel stalks, building them square, about three feet long and one foot deep, but making them narrower when there are not enough bees to fill them, so that they will not lose heart in a large empty space. All such hives are called *alvi*, ‘bellies,’ because of the nourishment (*alimonium*), honey, which they contain; and it seems that the reason they are made with a very narrow middle is that they may imitate the shape of the bees. [16] Those that are made of withes are smeared, inside and out, with cow-dung, so that the bees may not be driven off by any roughness; and these hives are so placed on brackets attached to the walls that they will not be shaken nor touch one another when they are arranged in a row. In this method, a second and a third row are placed below it at an interval, and it is said that it is better to reduce the number than to add a fourth. At the middle of the hive small openings are made on the right and left, by which the bees may enter; [17] and on the back, covers are placed through which the keepers can remove the comb. The best hives are those made of bark, and the worst those made of earthenware, because the latter are most severely affected by cold in winter and by heat in summer. During the spring and summer the bee-keeper should examine them about thrice a month, smoking them lightly, and clear the hive of filth and sweep out vermin. [18] He should further see to it that several chiefs do not arise, for they become nuisances because of their dissensions. Some authorities state also that, as there are three kinds of leaders among bees —

the black, the red, and the striped — or as Menecrates states, two — the black and the striped — the latter is so much better that it is good practice for the keeper, when both occur in the same hive, to kill the black; for when he is with the other king he is mutinous and ruins the hive, because he either drives him out or is driven out and takes the swarm with him. [19] Of ordinary bees, the best is the small round striped one. The one called by some the thief, and by others the drone, is black, with a broad belly. The wasp, though it has the appearance of a bee, is not a partner in its work, and frequently injures it by its sting, and so the bees keep it away. Bees differ from one another in being wild or tame; by wild, I mean those which feed in wooded places, and by tame those which feed in cultivated ground. The former are smaller in size, and hairy, but are better workers.

“In purchasing, the buyer should see whether they are well or sick. [20] The signs of health are their being thick in the swarm, sleek, and building uniformly smooth comb. When they are not so well, the signs are that they are hairy and shaggy, as if dusted over — unless it is the working season which is pressing them; for at this time, because of the work, they get tough and thin. [21] If they are to be transferred to another place, it should be done carefully, and the proper time should be observed for doing it, and a suitable place be provided to which to move them. As to the time, it should be in spring rather than in winter, as in winter it is difficult for them to form the habit of staying where they have been moved, and so they generally fly away. If you move them from a good situation to one where there is no suitable pasturage, they become runaways. And even if you move them from one hive into another at the same place, the operation should not be carried out carelessly, [22] but the hive into which the bees are going should be smeared with balm, which has a strong attraction for them, and combs full of honey should be placed inside not far from the entrance, for fear that, when they notice either a lack of food. . . . He says that when bees are sickly, because of their feeding in the early spring on the blossoms of the almond and the cornel, it is diarrhoea that affects them, and they are cured by drinking urine. [23] Propolis is the name given to a substance with which they build a protectum (‘gable’) over the entrance opening in front of the hive, especially in summer. This substance is used, and under the same name, by physicians in making poultices, and for this reason it brings even a higher price than honey on the Via Sacra. Erithace is the name given a substance with which they fasten together the ends of the comb (it is a different substance than either honey or propolis) and it is in it that the force of the attraction lies. So they smear with this substance, mixed with balm, the bough or other object on which they want the swarm to settle. [24] The comb is the structure which they fashion in a series of cells of wax, each separate cell having six sides, the same number as that of the feet given to each bee by nature. It is said that they do not gather wholly from the same sources the materials which they bring in for making the four substances, propolis, erithace, comb, and honey. Sometimes what they gather is of one

kind, since from the pomegranate and the asparagus they gather only food, from the olive tree wax, from the fig honey, but of a poor quality. [25] Sometimes a double service is rendered, as both wax and food from the bean, the balm, the gourd, and the cabbage; and similarly a double service of food and honey from the apple and wild pear, and still another double service in combination, since they get wax and honey from the poppy. A threefold service, too, is rendered, as food, honey, and wax from the almond and the charlock. From other blossoms they gather in such a way that they take some materials for just one of the substances, other materials for more than one; [26] they also follow another principle of selection in their gathering (or rather the principle follows the bees); as in the case of honey, they make watery honey from one flower, for instance the sisera, thick honey from another, for instance from rosemary; and so from still another they make an insipid honey, as from the fig, good honey from snail-clover, and the best honey from thyme. [27] As drink is a component of food, and as this, in the case of bees, is clear water, they should have a place from which to drink, and this close by; it should flow past their hives, or run into a pool in such a way that it will not rise higher than two or three fingers, and in this water there should lie tiles or small stones in such a way that they project a little from the water, so that the bees can settle on them and drink. In this matter great care should be taken to keep the water pure, as this is an extremely important point in making good honey. [28] As it is not every kind of weather that allows them to go far afield for feeding, food should be provided for them, so that they will not have to live on the honey alone at such times, or leave the hives when it is exhausted. So about ten pounds of ripe figs are boiled in six congii of water, and after they are boiled they are rolled into lumps and placed near the hives. Other apiarists have water sweetened with honey placed near the hives in vessels, and drop clean pieces of wool into it through which they can suck, for the double purpose of keeping them from surfeiting themselves with the drink and from falling into the water. A vessel is placed near each hive and is kept filled. Others pound raisins and figs together, soak them in boiled wine, and put pellets made of this mixture in a place where they can come out to feed even in winter.

[29] "The time when the bees are ready to swarm, which generally occurs when the well hatched new brood is over large and they wish to send out their young as it were a colony (just as the Sabines used to do frequently on account of the number of their children), you may know from two signs which usually precede it: first, that on preceding days, and especially in the evenings, numbers of them hang to one another in front of the entrance, [30] massed like a bunch of grapes; and secondly, that when they are getting ready to fly out or even have begun the flight, they make a loud humming sound exactly as soldiers do when they are breaking camp. Those which have gone out first fly around in sight, looking back for the others, which have not yet gathered, to swarm. When the keeper observes that they have acted so, he

frightens them by throwing dust on them and by beating brass around them; [31] and the place to which he wishes to carry them, and which is not far away, is smeared with bee-bread and balm and other things by which they are attracted. When they have settled, a hive, smeared on the inside with the same enticing substances, is brought up and placed near by; and then by means of a light smoke blown around them they are induced to enter. When they have moved into the new colony, they remain so willingly that even if you place near by the hive from which they came, still they are content rather with their new home.

[32] "As I have given my views on the subject of feeding, I shall now speak of the thing on account of which all this care is exercised — the profit. The signal for removing the comb is given by the following occurrences . . . if the bees make a humming noise inside, if they flutter when going in and out, and if, when you remove the covers of the hives, the openings of the combs are seen to be covered with a membrane, the combs being filled with honey. [33] Some authorities hold that in taking off honey nine-tenths should be removed and one-tenth left; for if you take all, the bees will quit the hive. Others leave more than the amount stated. Just as in tilling, those who let the ground lie fallow reap more grain from interrupted harvests, so in the matter of hives if you do not take off honey every year, or not the same amount, you will by this method have bees which are busier and more profitable. [34] It is thought that the first season for removing the comb is at the time of the rising of the Pleiades, the second at the end of summer, before Arcturus is wholly above the horizon, and the third after the setting of the Pleiades. But in this case, if the hive is well filled no more than one-third of the honey should be removed, the remainder being left for the wintering; but if the hive is not well filled no honey should be taken out. When the amount removed is large, it should not all be taken at one time or openly, for fear the bees may lose heart. If some of the comb removed contains no honey or honey that is dirty, it should be cut off with a knife. [35] Care should be taken that the weaker bees be not imposed upon by the stronger, for in this case their output is lessened; and so the weaker are separated and placed under another king. Those which often fight one another should be sprinkled with honey-water. When this is done they not only stop fighting, but swarm over one another, licking the water; and even more so if they are sprinkled with mead, in which case the odour causes them to attach themselves more greedily, and they drink until they are stupefied. [36] If they leave the hive in smaller numbers and a part of the swarm remains idle, light smoke should be applied, and there should be placed near by some sweet-smelling herbs, especially balm and thyme. [37] The greatest possible care should be taken to prevent them from dying from heat or from cold. If at any time they are knocked down by a sudden rain while harvesting, or overtaken by a sudden chill before they have foreseen that this would happen (though it is rarely that they are caught napping), and if, struck by the heavy rain-drops, they lie prostrate as if dead, they should be collected into a vessel

and placed under cover in a warm spot; the next day, when the weather is at its best, they should be dusted with ashes made of fig wood, and heated a little more than warm. Then they should be shaken together gently in the vessel, without being touched with the hand, and placed in the sun. [38] Bees which have been warmed in this way recover and revive, just as happens when flies which have been killed by water are treated in the same way. This should be carried out near the hives, so that those which have been revived may return each to his own work and home."

XVII.

Interea redit ad nos Pavo et, Si vultis, inquit, ancoras tollere, latis tabulis sortitio fit tribuum, ac coepti sunt a praecone recini, quem quaeque tribus fecerit aedilem. Appius confestim surgit, ut ibidem candidato suo gratularetur ac discederet in hortos. Merula, Tertium actum de pastionibus villaticis postea, inquit, tibi reddam, Axi. Consurgentibus illis, Axis mihi respectantibus nobis, quod et candidatum nostrum venturum sciebamus, Non laboro, inquit, hoc loco discessisse Merulam. Reliqua enim fere mihi sunt nota, quod, cum piscinarum genera sint duo, dulcium et salsarum, alterum apud plebem et non sine fructu, ubi Lymphae aquam piscibus nostris villaticis ministrant; illae autem maritimae piscinae nobilium, quibus Neptunus ut aquam et piscis ministrat, magis ad oculos pertinent, quam ad vesicam, et potius marsippium domini exinaniunt, quam implent. Primum enim aedificantur magno, secundo implentur magno, tertio aluntur magno. Hirrus circum piscinas suas ex aedificiis duodena milia sestertia capiebat. Eam omnem mercedem escis, quas dabat piscibus, consumebat. Non mirum; uno tempore enim memini hunc Caesari duo milia murenarum mutua dedisse in pondus et propter piscium multitudinem quadragies sestertio villam venisse. Quae nostra piscina mediterranea ac plebeia recte dicitur dulcis et illa amara; quis enim nostrum non una contentus est hac piscina? Quis contra maritimas non ex piscinis singulis coniunctas habet pluris? Nam ut Pausias et ceteri pictores eiusdem generis loculatas magnas habent arculas, ubi discolores sint cerae, sic hi loculatas habent piscinas, ubi dispares disclusos habeant pisces, quos, proinde ut sacri sint ac sanctiores quam illi in Lydia, quos sacrificanti tibi, Varro, ad tibicinem gregatim venisse dicebas ad extremum litus atque aram, quod eos capere auderet nemo, cum eodem tempore insulas Lydorum ibi choreuousas vidisses, sic hos piscis nemo cocus in ius vocare audet. Quintus Hortensius, familiaris noster, cum piscinas haberet magna pecunia aedificatas ad Baulos, ita saepe cum eo ad villam fui, ut illum sciam semper in cenam pisces Puteolos mittere emptum solitum. Neque satis erat eum non pasci e piscinis, nisi etiam ipse eos pasceret ultro ac maiorem curam sibi haberet, ne eius esurirent nulli, quam ego habeo, ne mei in Rosea esuriant asini, et quidem utraque re, et cibo et potione, cum non paulo sumptuosius, quam ego, ministraret victum. Ego enim uno servulo, hordeo non multo, aqua domestica meos multinummos alo asinos; Hortensius primum qui ministrarent piscatores

habebat complures, et ei pisciculos minutos aggerebant frequenter, qui a maioribus absumerentur. Praeterea salsamentorum in eas piscinas emptum coiciebat, cum mare turbaret ac per tempestatem macellum piscinarum obsonium praeberet neque everriculo in litus educere possent vivam saginam, plebeiae cenae piscis. Celerius voluntate Hortensi ex equili educeres redarias, ut tibi haberes, mulas, quam e piscina barbatum mullum. Atque, ille inquit, non minor cura erat eius de aegrotis piscibus, quam de minus valentibus servis. Itaque minus laborabat ne servos aeger aquam frigidam, quam ut recentem biberent sui pisces. Etenim hac incuria laborare aiebat M. Lucullum ac piscinas eius despiciebat, quod aestuaria idonea non haberet, ac residue aqua in locis pestilentibus habitarent pisces eius; contra ad Neapolim L. Lucullum, posteaquam perfodisset montem ac maritimum flumen immisisset in piscinas, qui reciproce fluerent ipsae, Neptuno non cedere de piscatu. Factum esse enim ut amicos pisces suos videatur propter aestus eduxisse in loca frigidiora, ut Apuli solent pecuarii facere, qui per calles in montes Sabinos pecus ducunt. In Baiano autem aedificans tanta ardebat cura, ut architecto permiserit vel ut suam pecuniam consumeret, dummodo perduceret specus e piscinis in mare obiecta mole, qua aestus bis cotidie ab exorta luna ad proximam novam introire ac redire rursus in mare posset ac refrigerare piscinas.

Nos haec. At strepitus ab dextra et cum lata candidatus noster designatus aedilis in villam. Cui nos occedimus et gratulati in Capitolium persequimur. Illi inde endo suam domum, nos nostram, o Pinni noster, sermone de pastione villatica summatim hoc, quem exposui, habito.

[17.1] Meantime Pavo returns to us and says: "If you wish to weigh anchor, the ballots have been cast and the casting of lots for the tribes is going on; and the herald has begun to announce who has been elected aedile by each tribe." Appius arose hurriedly, so as to congratulate his candidate at once and then go on to his home. And Merula remarked: "I'll give you the third act of the husbandry of the steading later, Axius." As they were rising, and we were looking back, because we knew that our candidate was coming also, Axius remarked to me: "I am not sorry that Merula left at this point, [2] for the rest is pretty well known to me. There are two kinds of fish-ponds, the fresh and the salt. The one is open to common folk, and not unprofitable, where the Nymphs furnish the water for our domestic fish; the ponds of the nobility, however, filled with sea-water, for which only Neptune can furnish the fish as well as the water, appeal to the eye more than to the purse, and exhaust the pouch of the owner rather than fill it. For in the first place they are built at great cost, and in the second place they are stocked at great cost, and in the third place they are kept up at great cost. [3] Hirrus used to take in 12,000 sesterces from the buildings around his fish-ponds; but he spent all that income for the food which he gave his fish. No wonder; for I remember that he lent to Caesar on one occasion 2,000 lampreys by weight; and that on account of the great number of fish his villa sold for 4,000,000 sesterces. Our

inland pond, which is for the common folk, is properly called ‘sweet,’ and the other ‘bitter’; for who of us is not content with one such pond? Who, on the other hand, who starts with one of the sea-water ponds doesn’t go on to a row of them? [4] For just as Pausias and the other painters of the same school have large boxes with compartments for keeping their pigments of different colours, so these people have ponds with compartments for keeping the varieties of fish separate, as if they were holy and more inviolate than those in Lydia about which, Varro, you used to say that while you were sacrificing, they would come up in schools, at the sound of a flute, to the edge of the shore and the altar, because no one dared catch them (the same time as that at which you saw the dancing islands of the Lydians); just so no cook dares ‘haul these fish over the coals.’ [5] Though our friend Quintus Hortensius had ponds built at great expense near Bauli, I was at his villa often enough to know that it was his custom always to send to Puteoli to buy fish for dinner. [6] And it was not enough for him not to feed from his ponds — nay, he must feed his fish with his own hands; and he actually took more pains to keep his mullets from getting hungry than I do to keep my mules at Rosea from getting hungry, and indeed he furnished them nourishment in the way of both food and drink much more generously than I do in caring for my donkeys. For I keep my very valuable asses with the help of a single stable-boy, a bit of barley, and water from the place; while Hortensius in the first place kept an army of fishermen to supply food, and they were continually heaping up minnows for the larger fish to eat. [7] Besides, he used to buy salted fish and throw them into ponds when the sea was disturbed and on account of bad weather this source of supply of the ponds failed to furnish food, and the live food — the fish which supplies the people with supper — could not be brought ashore with the net.” “You could more easily get Hortensius’s consent to take the carriage mules (mulas) from his travelling-carriage and keep them for your own,” said I, “than take a barbed mullet (mullum) from his pond.” [8] “And,” he continued, “he was no less disturbed over his sick fish than he was over his ailing slaves. And so he was less careful to see that a sick slave did not drink cold water than that his fish should have fresh water to drink. In fact he used to say that Marcus Lucullus suffered from carelessness in this respect, and he looked down on his ponds because they did not have suitable tidal-basins, and so, as the water became stagnant, his fish lived in unwholesome quarters; [9] while, on the other hand, after Lucius Lucullus had cut through a mountain near Naples and let a stream of sea-water into his ponds, so that they ebbed and flowed, he had no need to yield to Neptune himself in matter of fishing — for he seemed, because of the hot weather, to have led his beloved fish into cooler places, just as the Apulian shepherds are wont to do when they lead their flocks along the cattle-trails into the Sabine hills. But while he was building near Baiæ he became so enthusiastic that he allowed the architect to spend money as if it were his own, provided he would run a tunnel from his ponds into the sea and throw up a mole, so that the tide might run into the pond and

back to the sea twice a day from the beginning of the moon until the next new moon, and cool off the ponds.”

[10] So far we. Then a noise on the right, and our candidate, as aedile-elect, came into the villa wearing the broad stripe. We approach and congratulate him and escort him to the Capitoline. Thence, he to his home, we to ours, my dear Pinnius, after having had the conversation on the husbandry of the villa, the substance of which I have given you.

The Biographies



The Acropolis at Athens — Varro later studied at Athens under the Academic philosopher Antiochus of Ascalon. Varro proved to be a highly productive writer and turned out more than 74 works on a variety of topics.

INTRODUCTION TO MARCUS TERENTIUS VARRO

by Roland G. Kent



VARRO'S LIFE AND WORKS

MARCUS TERENTIUS VARRO was born in 116 B.C., probably at Reate in the Sabine country, where his family, which was of equestrian rank, possessed large estates. He was a student under L. Aelius Stilo Praeconinus, a scholar of the equestrian order, widely versed in Greek and Latin literature and especially interested in the history and antiquities of the Roman people. He studied philosophy at Athens, with Antiochus of Ascalon. With his tastes thus formed for scholarship, he none the less took part in public life, and was in the campaign against the rebel Sertorius in Spain, in 76. He was an officer with Pompey in the war with the Cilician pirates in 67, and presumably also in Pompey's campaign against Mithradates. In the Civil War he was on Pompey's side, first in Spain and then in Epirus and Thessaly.

He was pardoned by Caesar, and lived quietly at Rome, being appointed librarian of the great collection of Greek and Latin books which Caesar planned to make. After Caesar's assassination, he was proscribed by Antony, and his villa at Casinum, with his personal library, was destroyed. But he himself escaped death by the devotion of friends, who concealed him, and he secured the protection of Octavian.

He lived the remainder of his life in peace and quiet, devoted to his writings, and died in 27 B.C., in his eighty-ninth year.

Throughout his life he wrote assiduously. His works number seventy-four, amounting to about six hundred and twenty books; they cover virtually all fields of human thought: agriculture, grammar, the history and antiquities of Rome, geography, law, rhetoric, philosophy, mathematics and astronomy, education, the history of literature and the drama, satires, poems, orations, letters.

Of all these only one, his *De Re Rustica* or *Treatise on Agriculture*, in three books, has reached us complete. His *De Lingua Latina* or *On the Latin Language*, in twenty-five books, has come down to us as a torso, only Books V. to X. are extant, and there are serious gaps in these. The other works are represented by scattered fragments only.

VARRO'S GRAMMATICAL WORKS

The grammatical works of Varro, so far as we know them, were the following:

De Lingua Latina, in twenty-five books, a fuller account of which is given below.

De Antiquitate Litterarum, in two books, addressed to the tragic poet L. Accius, who died about 86 B.C.; it was therefore one of Varro's earliest writings.

De Origine Linguae Latinae, in three books, addressed to Pompey.

Peri Χαρακτήρων, in at least three books, on the formation of words.

Quaestiones Plautinae, in five books, containing viii interpretations of rare words found in the comedies of Plautus.

De Similitudine Verborum, in three books, on regularity in forms and words.

De Utilitate Sermonis, in at least four books, in which he dealt with the principle of anomaly or irregularity.

De Sermone LciliHno, in five books or more, addressed to Marcellus, which treats of orthography and the metres of poetry.

Disciplinae, an encyclopaedia on the liberal arts, in nine books, of which the first dealt with *Grammatica*.

The extant fragments of these works, apart from those of the *De Lingua Latina*, may be found in the Goetz and Schoell edition of the *De Lingua Latina*, pages 199-212; in the collection of Wilmanns, pages 170-223; and in that of Funaioli, pages 179-371 (see the Bibliography).

VARRO'S *DE LINGUA LATINA*

Varro's treatise *On the Latin Language* was a work in twenty-five books, composed in 47 to 45 B.C., and published before the death of Cicero in 43.

The first book was an introduction, containing at the outset a dedication of the entire work to Cicero. The remainder seems to have been divided into four sections of six books each, each section being by its subject matter further divisible into two halves of three books each.

Books II.-VII. dealt with the *impositio vocabulorum*, or how words were originated and applied to things and ideas. Of this portion, Books II.-IV. were probably an earlier smaller work entitled *De Etymologia* or the like; it was separately dedicated to one Septumius or Septimius, who had at some time, which we cannot now identify, served Varro as quaestor. Book II. presented the arguments which were advanced against Etymology as a branch of learning; Book III. presented those in its favour as a branch of learning, and useful; Book IV. discussed its nature.

Books V.-VII. start with a new dedication to Cicero. They treat of the origin of words, the sources from which they come, and the manner in which new words develop. Book V. is devoted to words which are the names of places, and to the objects which are in the places under discussion; VI. treats words denoting time-ideas, and those which contain some time-idea, notably verbs; VII. explains rare and difficult words which are met in the writings of the poets.

Books VIII.-XIII. dealt with derivation of words from other words, including stem-derivation, declension of nouns, and conjugation of verbs. The

first three treated especially the conflict between the principle of Anomaly, or Irregularity, based on *consuetudo* 'popular usage,' and that of Analogy, or Regularity of a proportional character, based on *ratio* 'relation' of form to form. VIII. gives the arguments against the existence of Analogy, IX. those in favour of its existence, X. Varro's own solution of the conflicting views, with his decision in favour of its existence. XI.-XIII. discussed Analogy in derivation, in the wide sense given above: probably XI. dealt with nouns of place and associated terms, XII. with time, ideas, notably verbs, XIII. with poetic words.

Books XIV.-XIX. treated of syntax. Books XX.- XXV. seem to have continued the same theme, but probably with special attention to stylistic and rhetorical embellishments.

Of these twenty-five books, we have to-day, apart from a few brief fragments, only Books V. to X., and in these there are several extensive gaps where the manuscript tradition fails.

The fragments of the *De Lingua Latina*, that is, those quotations or paraphrases in other authors which do not correspond to the extant text of Books V.-X., are not numerous nor long. The most considerable of them are passages in the *Noctes Atticae* of Aulus Gellius ii. 25 and xvi. 8. They may be found in the edition of Goetz and Schoell, pages 3, 146, 192-198, and in the collections of Wilmanns and Funaioli (see the Bibliography).

It is hardly possible to discuss here even summarily Varro's linguistic theories, the sources upon which he drew, and his degree of independence of thought and procedure. He owed much to his teacher Aelius Stilo, to whom he refers frequently, and he draws heavily upon Greek predecessors, of course, but his practice has much to commend it: he followed neither the Anomalists nor the Analogists to the extreme of their theories, and he preferred to derive Latin words from Latin sources, rather than to refer practically all to Greek origins. On such topics reference may be made to the works of Barwick, Kowalski, Dam, Dahlmann, Kriegshammer, and Frederik Muller, and to the articles of Wofflin in the eighth volume of the *Archiv für lateinische Lexikographie*, all listed in our Bibliography.

THE MANUSCRIPTS OF THE *BE LINGUA LATINA*

The text of the extant books of the *De Lingua Latina* is believed by most scholars to rest on the manuscript here first listed, from which (except for our No. 4) all other known manuscripts have been copied, directly or indirectly.

1. *Codex Laurentianus* li. 10, folios 2 to 34, parchment, written in Langobardic characters in the eleventh century, and now in the Laurentian Library at Florence. It is known as *F*.

F was examined by Petrus Victorius and Iacobus Diacetus in 1521 (see the next paragraph); by Hieronymus Lagomarsini in 1740; by Heinrich Keil in 1851; by Adolf Groth in 1877; by Georg Schoell in 1906. Little doubt can remain as to its actual readings.

2. In 1521, Petrus Victorius and Iacobus Diacetius collated *F* with a copy of the *editio princeps* of the *De Lingua Latina*, in which they entered the differences which they observed. Their copy is preserved in Munich, and despite demonstrable errors in other portions, it has the value of a manuscript for v. 119 to vi. 61, where a quaternion has since their time been lost in *F*. For this portion, their recorded readings are known as *Fv*; and the readings of the *editio princeps*, where they have recorded no variation, are known as (*Fv*).

3. The *Fragmentant Cassinense* (called also *Excerptum* and *Epitome*), one folio of *Codex Cassinensis* 361, parchment, containing v. 41 *Capitolium dictum* to the end of v. 56; of the eleventh century. It was probably copied direct from *F* soon after *F* was written, but may possibly have been copied from the archetype of *F*. It is still at Monte Cassino, and was transcribed by Keil in 1848. It was published in facsimile as an appendix to *Sexti Iulii Frontini de aquaeductu Urbis Romae*, a phototyped reproduction of the entire manuscript, Monte Cassino, 1930.

4. The grammarian Priscian, who flourished about A.D. 500, transcribed into his *De Figuris Numerorum* Varro's passage on coined money, beginning with *multa*, last word of v. 168, and ending with *Nummi denarii decuma libella*, at the beginning of v. 174. The passage is given in H. Keil's *Grammatici Latini* iii. 410-411. There are many manuscripts, the oldest and most important being *Codex Pansinus* 7496, of the ninth century.

5. *Codex Laurentianus* li. 5, written at Florence in 1427, where it still remains; it was examined by Keil. It is known as *sf*.

6. *Codex Ilavniensis*, of the fifteenth century; on paper, small quarto, 108 folia; now at Copenhagen. It was examined by B. G. Niebuhr for Koeler, and his records came into the hands of L. Spengel. It is known as *II*.

7. *Codex Gothanus*, parchment, of the sixteenth century, now at Gotha; it was examined by Regel for K. O. Mueller, who published its important variants in his edition, pages 270-298. It is known as *G*.

8. *Codex Pansinus* 7189, paper, of the fifteenth century, now at Paris; this and the next two were examined by Donndorf for L. Spengel, who gives their different readings in his edition, pages 661-718. It is known as *a*.

9. *Codex Parisinus* 6142, paper, of the fifteenth century; it goes only to viii. 7 *declinarentur*. It is known as *6*.

10. *Codex Parisinus* 7535, paper, of the sixteenth century; it contains only v. 1-122, ending with *dictae*. It is known as *c*.

11. *Codex Vindobonensis* lxiii., of the fifteenth century, at Vienna; it was examined by L. Spengel in 1835, and its important variants are recorded in the apparatus of A. Spengel's edition. It is known as *V*.

12. *Codex Basiliensis* F iv. 13, at Basel; examined by L. Spengel in 1838. It is known as *p*.

13. *Codex Guelferbytanus* 896, of the sixteenth century, at Wolfenbiittel; examined by Schneidewin for K. O. Mueller, and afterwards by L. Spengel. It is known as *M*.

14. *Codex B*, probably of the fifteenth century, now not identifiable; its variants were noted by Petrus Victorius in a copy of the *Editio Gryphiana*, and either it or a very similar manuscript was used by Antonius Augustinus in preparing the so-called *Editio Vulgata*.

These are the manuscripts to which reference is made in our critical notes; there are many others, some of greater authority than those placed at the end of our list, but their readings are mostly not available. In any case, as *F* alone has prime value, the variants of other than the first four in our list can be only the attempted improvements made by their copyists, and have accordingly the same value as that which attaches to the emendations of editors of printed editions.

Fuller information with regard to the manuscripts may be found in the following:

Leonhard Spengel, edition of the *De Lingua Latina* (1826), pages v-xviii.

K. O. Mueller, edition (1833), pages xii-xxxi. Andreas Spengel, edition (1885), pages ii-xxviii. Giulio Antonibon, *Supplemento di Lezioni Varianti ai libri de lingua Latina* (1899), pages 10-23.

G. Goetz et F. Schoell, edition (1910), pages xi-xxxv.

THE LAURENTIAN MANUSCRIPT *F*

Manuscript *F* contains all the extant continuous text of the *De Lingua Latina*, except v. 119 *trua quod* to vi. 61 *dicendofinit*; this was contained in the second quaternion, now lost, but still in place when the other manuscripts were copied from it, and when Victorius and Diacetus collated it in 1521. There are a number of important lacunae, apart from omitted lines or single words; these are due to losses in its archetype.

Leonhard Spengel, from the notations in the manuscript and the amount of text between the gaps, calculated that the archetype of *F* consisted of 16 quaternions, with these losses:

Quaternion 4 lacked folios 4 and 5, the gap after v. — 162.

Quaternion 7 lacked folio 2, the end of vi and the beginning of vii., and folio 7, the gap after vii. 23. Quaternion 11 was missing entire, the end of viii and the beginning of ix.

Quaternion 15 lacked folios 1 to 3, the gap after x. 23, and folios 6 to 8, the gap after x. 34.

The amount of text lost at each point can be calculated from the fact that one folio of the archetype held about 50 lines of our text.

There is a serious transposition in *F*, in the text of Book V. In § 23, near the end, after *qui ad humum*, there follows *ut Sabini*, now in § 32, and so on to *Septimontium*, now in § 41; then comes *demissior*, now in § 23 after *humum*, and so on to *ab hominibus*, now in § 32, after which comes *nominatum* of § 41. Mueller, who identified the transposition and restored the text to its true order in his edition, showed that the alteration was due to the wrong folding of folios 4 and 5 in the first quaternion of an archetype of *F*; though this was not

the immediate archetype of *F*, since the amount of text on each page was different.

This transposition is now always rectified in our printed texts; but there is probably another in the later part of Book V., which has not been remedied because the breaks do not fall inside the sentences, thus making the text unintelligible. The sequence of topics indicates that v. 115-128 should stand between v. 140 and v. 141 ; there is then the division by topics:

General Heading v. — 105

De Victu — v. — 105-112

De Vestitu — v. — 113-114, — 129-133

De Instrumenta — v. — 134-140, — 115-128, 141-183

Then also vi. 49 and vi. 45 may have changed places, but I have not introduced this into the present text; I have however adopted the transfer of x. 18 from its manuscript position after x. 20, to the position before x. 19, which the continuity of the thought clearly demands.

The text of *F* is unfortunately very corrupt, and while there are corrections both by the first hand and by a second hand, it is not always certain that the corrections are to be justified.

THE ORTHOGRAPHY OF THE *DE LINGUA LATINA*

The orthography of *F* contains not merely many corrupted spellings which must be corrected, but also many variant spellings which are within the range of recognized Latin orthography, and these must mostly be retained in any edition. For there are many points on which we are uncertain of Varro's own practice, and he even speaks of certain permissible variations: if we were to standardize his orthography, we should do constant violence to the best manuscript tradition, without any assurance that we were in all respects restoring Varro's own spelling. Moreover, as this work is on language, Varro has intentionally varied some spellings to suit his etymological argument; any extensive normalization might, and probably would, do him injustice in some passages. Further, Varro quotes from earlier authors who used an older orthography; we do not know whether Varro, in quoting from them, tried to use their original orthography, or merely used the orthography which was his own habitual practice.

I have therefore retained for the most part the spellings of *F*, or of the best authorities when *F* fails, replacing only a few of the more misleading spellings by the familiar ones, and allowing other variations to remain. These variations mostly fall within the following categories:

1. El: Varro wrote El for the long vowel I in the nom pi of Decl. II (ix. 80); but he was probably not consistent in writing El everywhere. The manuscript testifies to its use in the following: *plebei* (gen.; cf *plebis* vi. 91, in a quotation) v. 40, 81, 158, vi. 87; *eidem* (nom sing.) vii. 17 (*eadem F*), x. 10; *scirpeis* vii. “; *Terentiei* (nom.), *vireis Terentieis* (masc.), *Terentieis* (fern.) viii. 36; *infeineiteis* viii. 50 (changed to *infiniteis* in our text, cf. *{in}finitam* viii.

52); *i(e)is* viii. 51 (*his F*), ix. 5; *iei* (nom.) ix. 2, 35; *hei re{e)i fer(re)ei de(e)i* viii. 70; *hinnulei* ix. 28; *utrei* (nom pi.) ix. 65 (*utre.I. F*; cf *utri* ix. 65); (*B*)*a(e)biei*, (*B{a)ebieis* x. 50 (alongside *Caelii*, *Celiis*).

2. AE and E: Varro, as a countryman, may in some words have used E where residents of the city of Rome used AE (cf v. 97); but the standard orthography has been introduced in our text, except that E has been retained in *seculum* and *sepio* (and its compounds: v. 141, 150, 157, 162, vii. 7, 13), which always appear in this form.

3. OE and U: The writing OE is kept where it appears in the manuscript or is supported by the context: *moems* and derivatives v. 50, 141 *his*, 143, vi. — 87; *moenere*, *moenitius* v. 141; *Poenicum* v. 113, viii. 65 *his*; *poeniendo* v. 177. OE in other words is the standard orthography.

4. VO UO and VU UU: Varro certainly wrote only VO or UO, but the manuscript rarely shows VO. or UO in inflectional syllables. The examples are *novorn* ix. 20 (corrected from *nouum* in *F*); *nominatuom* ix. 95, x. 30 (both *-tiuom F*); *obliquom* x. 50; *loquontur* vi. 1, ix. 85; *sequontur* x. 71; *clivos* v. 158; perhaps *amburvom* v. 127 (*impurro Fv*). In initial syllables VO is almost regular: *volt* vi. 47, etc.; *volpes* v. 101; *volgus* v. 58, etc., but *vulgo* viii. 66; *Volcanus* v. 70, etc.; *voleillis* ix. 33. Examples of the opposite practice are *aequum* vi. 71; *duum* x. 11; *antiquus* vi. 68; *sequuntur* viii. 25; *confluunt* x. 50. Our text preserves the manuscript readings.

5. UV before a vowel: Varro probably wrote U and not UV before a vowel, except initially, where his practice may have been the other way. The examples are: *Pacuius* v. 60, vi. 6 (*Catulus (Fv)*), 94, vii. 18, 76, and *Pacwius* v. 17, 24, vii. 59; gen. *Pacui* v. 7, vi. 6, vii. — 22; *Pacuium* vii. 87, 88, 91, 102; *compluium*, *impluium* v. 161, and *pluvia* v. 161, *compluvium* v. 125; *simpuium* v. 124 *his* (*sinipulum* codd.); cf *panuvellium* v. 114. Initially: *uvidus* v. 24; *uvae*, *uvore* v. 104; *uvidum* v. 109.

6. U and I: Varro shows in medial syllables a variation between U and I, before P or B or F or M plus a vowel. The orthography of the manuscript has been retained in our text, though it is likely that Varro regularly used U in these types:

The superlative and similar words: *ulbissimum* viii. — 75; *fnigalissimum* viii. 77; *c(a)esi(s)sumus* viii. 76; *intumus* v. 154; *maritumae* v. 113; *melisxumum* viii. — 76; *optumum* vii. 51; *pauperrumus* viii. 77; *proxuma* etc v. 36, 93, ix. 115, x. 4, 26; *septuma* etc. ix. — 30, x. 46 *ter*; *Septumio* v. 1, vii. 109; *superrumo* vii. — 51; *decuma* vi. 54. Cf *proximo optima maxima* v. — 102, *minimum* vii. 101, and many in viii. 75-78.

Compounds of *-fex* and derivatives: *pontufex* v. 83, *pontufces* v. 83 (*F* for *pontifces*); *artufces* ix. 12; *sacruficiis* v. 98, 124. Cf *pontifces* v. 23, vi. 54, etc.; *artifex* v. 98, ix. Ill, etc.; *sacrificium* vii. 88, etc.

Miscellaneous words: — *monumentum* v. 148, but *monimentum* etc v. 41, vi. 49 *his*; *mancupis* v. 40, but *mancipium* etc v. 163, vi. 74, 85; *quadrupes* v. 34, but *quadripedem* etc vii. 39 *his*, *quadriplex* etc x. 46 etc., *quadripertita* etc

v. 12 etc.

7. LUBET and LIBET: Varro probably wrote *lubet*, *lubido*, etc., but the orthography varies, and the manuscript tradition is kept in our text: — *lubere lubendo* vi. 47, *lubenter* vii. 89, *lubitum* ix. 34, *lubidine* x. 56; and *libido* vi. 47, x. 60, *libidinosus Libentina Libitina* vi. 47, *libidine* x. 61.

8. H: Whether Varro used the initial H according to the standard practice at Rome, is uncertain. In the country it was likely to be dropped in pronunciation; and the manuscript shows variation in its use. We have restored the H in our text according to the usual orthography, except that *irpices*, v. 136 *his*, has been left because of the attendant text. Examples of its omission are *Arpocrates* v. 57; *Ypsicrates* v. 88; *aedus ircus* v. 97; *olus olera* v. 108, x. 50; *olitorium* v. 146; *olitores* vi. 20; *ortis* v. 103, *ortorum* v. 146 *his*, *orti* vi. 20; *aruspex* vii. 88. These are normalized in our text, along with certain other related spellings: *sepulchrum* vii. 24 is made to conform to the usual *sepulcrum*, and the almost invariable *nichil* and *nichili* have been changed to *nihil* and *nihili*.

9. X and CS: There are traces of a writing CS for X, which has in these instances been kept in the text: *arcs* vii. “ (*ares F*); *acsitiosae (ac sitiose F)*, *acsitinsa (ac sitio a- F)* vi. 66; *ducs (duces F)* x. 57.

10. DOUBLED CONSONANTS: Varro's practice in this matter is uncertain, in some words. *F* regularly has *littera* (only *Uteris* v. 3 has one T), but *obliterata* (ix. 16, *-atae* ix. 21, *-amt* v. 52), and these spellings are kept in our text. *Communis* has been made regular, though *F* usually has one M; *casus* is invariable, except for *de cassu in cassum* viii. 39, which has been retained as probably coming from Varro himself. *Iupiter*, with one P, is retained, because invariable in *F*; the only exception is *Iuppitri* viii. 33 (*iuppiti F*), which has also been kept. *Numo* vi. 61, for *nummo*, has been kept as perhaps an archaic spelling. *Decusis* ix. 81 has for the same reason been kept in the citation from Lucilius. In a few words the normal orthography has been introduced in the text: *grallator* vii. 69 *his* for *gralator*, *grabatis* viii. 32 for *gra battis*. For combinations resulting from prefixes see the next paragraph.

11. CONSONANTS OF PREFIXES: Varro's usage here is quite uncertain, whether he kept the unassimilated consonants in the compounds. Apparently in some groups he made the assimilations, in others he did not. The evidence is as follows, the variant orthography being retained in our text:

Ad-c-: always *acc-*, except possibly *adeensos* vii. 58 (*F*, for *acensos F*).

Ad-f-: always *aff-*, except *adfuerit* vi. 40.

Ad-l-: always *all-*, except *adlocutum* vi. 57, *adlucet* vi. 79, *adlatis (ablatis F)* ix. 21.

Ad-m-: always *adm-*, except *ammonendum* v. 6, *amministrat* vi. 78, *amminicula* vii. 2, *amminister* vii. 34 (*F*, for *adm- F*).

Ad-s-: regularly *ass-*, but also *adserere* vi. 64, *adsiet* vi. 92, *adsimus* vii. 99, *adsequi* viii. 8, x. 95 *od-* *significare* often (always except *assignificant* vii. 80), *adsumi* viii. 69, *adsumat* ix. 42, *adsumere* x. 58.

Ad-sc-, ad-sp-, ad-st-: always with loss of the D, as in *ascendere*, *ascribere*, *ascriptos* (vii. 57), *ascriptivi* (vii. 56), *aspicere*, *aspectus*, *astans*.

Ad-t-: — always *ait-*, except *adtributa* v. 48, and possibly *adtinuit* (F, but *att-* F) ix. 59-

Con-l-, con-b-, con-m-, con-r-: — always *coll-, comb-, comm-, corr-*.

Con-p-: always *comp-*, except *conpernis* ix. 10.

Ex-f-: always *eff-*, except *exfluit* v. 29.

Ex-s-: *exsolveret* v. 176, *exsuperet* vi. 50, but *exuperantum* vii. 18 (normalized in our text to *ex su per ant uni*).

Ex-sc-: *exculpserant* v. 143.

Ex-sp-: always *expecto* etc vi. 82, x. 40, etc.

Ex-sq-: regularly *Esquiliis*; but *Exquiliias* v. 25, *Exquiliis* v. 159 (Fv), normalized to *Esq-* in our text.

Ex-st-: *extat* v. 3, vi. 78; but *exstat* v. 3, normalized to *extat* in our text.

In-l-: usually *ill-*, but *indicium* vi. 88 *his*, 93 (*illici-* turn F), 94, 95, *inliceret* vi. 90, *inliciat* vi. 94; the variation is kept in our text:

In-m-: always *imm-*, except in *(in)mutatis* vi. 38, where the restored addition is unassimilated to indicate the negative prefix and not the local *in*.

In-p-: always *imp-*, except *inpos* v. 4 *his* (once *ineos* F), *inpotem* v. 4 (*inpoientem* F), *inplorat* vi. 68.

Ob-c-, ob-f-, ob-p-: always *occ-, off-, opp-*.

Ob-t-: always *opt-*, as in *optineo* etc vii. 17, 91 J x. 19, *optemperare* ix. 6.

Per-l-: *pellexit* vi. 94, but *perlucent* v. 140. xxii *Sub-c-, sub-f-, sub-p-*: always *suce-, suff-, supp-*, except *subeidit* v. 116.

Sub-s- and *subs-* + consonant: regularly *sus-* + consonant, except *subscribunt* vii. 107.

Sub-t-: only in *suptilius* x. 40.

Trans-l-: in *tralutum* vi. 77, vii. 23, 103, x. 71; *tralaticio* vi. 55 (*trmilatio* Fv) and *trajislaticio* v. 32, vi. — 64 (*traiislatio* F, *tranlatio* Fv), *translaticiiis* vi. 78.

Trans-v-: in *travolat* v. 118, and *transversus* vii. 81, x. 22, 23, 43.

Trans-d-: in *traducere*.

12. DE and DI: The manuscript has been followed in the orthography of the following: *directo* vii. 15, *dirigi* viii. 26, *derecti* x. 22 *his*, *derigimtur* *derectorum* x. 22, *derecta* *directis* x. 43, *directas* x. 44, *derigitur* x. 74; *deiunctum* x. 45, *deiunctae* x. 47.

13. SECOND DECLENSION: Nom sing, and acc sing, in *-uom* and *-uum*, see 5.

Gen sing, of nouns in *-lus*: Varro used the form ending in a single I (*cf* viii. 36), and a few such forms stand in the manuscript: *Muci* v. 5 (*tnuti* F); *Pacui* v. 7, vi. 6, vii. 22; *Mani* vi. 90; *Quinti* vi. 92, *Ephesi* viii. — 22 (*epthesis* F), *Plauti et Marci* viii. 36, *dispendi* ix. — 54 (quoted, metrical; alongside *dispendii* ix. 54). The gen in II is much commoner; both forms are kept in our text.

Norn, pi., written by Varro with EI (*cf* ix. 80); examples are given in 1, above.

Gen pi.: The older form in *-um* for certain words (*denarium*, *centumvirum*, etc.) is upheld viii. 71, ix. 82, 85, and occurs occasionally elsewhere:

Velabrum v. 44, *Querquetulanum* v. 49, *Sabinum* v. 74, etc.

Dat.-abl pi., written by Varro with EIS (*cf* ix. 80); examples are given in 1, above, but the manuscript regularly has IS.

Dat.-abl pi of nouns ending in *-ius*, *-ia*, *-ium*, are almost always written IIS; there are a few for which the manuscript has IS, which we have normalized to IIS: *Gabis* v. 33, *(Es)quilis* v. 50, *hostis* v. 98, *Publicis* v. — 158, *Faleris* v. 162, *praeverbis* vi. 82 (*cf* *praeverbis* vi. — 38 *his*), *my si er is* vii. 31 (*cf* *mysteriis* vii. 19), *miliaris* ix. 85 (*militari s F*).

Deus shows the following variations: Norn pi *de(e)i* viii. 70, *dei* v. 57, 58 *his*, 66, 71, vii. 36, ix. 59, *dii* v. 58, 144', vii. 16; dat.-abl pi *dels* v. 122, vii. 45, *diis* v. 69, 71, 182, vi. 24, 34, vii. 34.

14. THIRD DECLENSION: — The abl sing, varies between E and I: *supellectile* viii. 30, 32, ix. 46, and *supelleciili* ix. 20 {-*lis F*}; *cf* also *vesperi (uespert- F)* and *vespere* ix. 73.

Norn, pi., where ending in IS in the manuscript, is altered to ES; the examples are *mediocris* v. 5; *partis* v. — 21, 56; *ambonis* v. 115; *urbis* v. 143; *aedis* v. 160; *comphuris* vi. 15; *Novendialis* vi. 26; *auris* vi. 83; *dis- parilis* viii. 67; *lends* ix. 31; *ornnis* ix. 81; *dissimtlis* ix. 92.

Gen pi in UM and IUM, see viii. 67. In view of *dentum* viii. 67, expressly championed by Varro, *Veientum* v. 30 (*uenientum F*), *caelestum* vi. 53, *Quiritum* vi. — 68 have been kept in our text.

Acc pi in ES and IS, see viii. 67. Varro's distribution of the two endings seems to have been purely empirical and arbitrary, and the manuscript readings have been retained in our text.

15. FOURTH DECLENSION: — Gen sing.: — Gellius, *Nodes Atticae* iv. 16. 1, tells us that Varro always used UIS in this form. Nonius Marcellus 483-494 M. cites eleven such forms from Varro, but also *sumpti*. The *De Lingua Latina* gives the following partial examples of this ending: *usuis* ix. 4 (*suis F*), x. 73 (*usui F*), *casuis* x. 50 (*casuum F*), x. 62 (*casus his F*). Examples of this form ending in US are kept in our text: *fructus* v. — 34, 134, *senatus* v. 87, *exercitus* v. 88, *panus* v. 105, *domus* v. 162, *census* v. 181, *motus* vi. 3, *sonitus* vi. 67 *sensus* vi. 80, uSUS viii. 28, 30 *his*, — ix. 76, *manus* ix. 80.

Gen pi.: For the variation between UUM and UOM see 4, above. The form with one U is found in *tribum* v. 56, *ortum* v. 66, *manum* vi. 64 (*manu F*), *magistratum* viii. 83 (*-tus F*), *declinatum* x. 54; these have been normalized in our text to UUM (except *manum*, in an archaic formula). Note the following forms in the manuscript: *cornuum* v. 117, *declinatuuum* vi. — 36 (*-tiuuum Fu*), x. 31, 32, 54, *sensuum* vi. 80; *tribuum* vi. 86; *fructuum* ix. 27; *casuum* ix. 77, x. 14, 23, *manuum* ix. 80, *nominatuom (-tiuom F)* ix. 95, x. 30, nomination x. 19.

16. HETEROCLITES: There are the following: gen sing, *plebei* v. 40, 81, 158, vi. 87, and *plebis* vi. 91; nom sing, *elephans* and acc pi *elepantos* vii. 39; abl sing. *Titano* vii. 16; abl pi *vasis* v. 121, *poematis* vii. 2, 36, viii. 14, and *poematibus* vii. 34.

17. GREEK FORMS: There are the following: acc sing, *analogian* ix. 1, 26, 33, 34, 15, 49, 76, 79, 105, 113, 114, but also *analogiam* ix. 90, 100, no, x. 2, and *analogia(m)* ix. 95, 111. Acc sing. *Aeihopa* viii. 38 (*ethiopam F*). Norn pi. *Aeolis* v. 25, 101, 102, 175, *Athenaiis* viii. 35.

18. FORMS OF IS AND IDEM: The forms in the manuscript are kept in our text; there are the following to be noted:

Nom sing masc.: *idem* often; also *eidem* vii. 17 (*eadem F*), x. 10.

Nom pl.: *ii* v. 26, ix. 2; *iei* ix. 2, 35; *idem* ix. 19.

Dat.-abl pl.: *eis* vi. 18, vii. 102, ix. 4, x. 8; *ieis* viii. — 51 (*his F*, but assured by context), ix. 5; *is* vii. 5 (*dis F*); *iisdem* vi. 38; *isdem* vii. 8 (*hisdem F*), viii. 35 *his* (*hisdem F*).

19. QUOM and CUM etc.: Varro wrote *quom*, *quor*, *quoins*, *quoi*, and not *cum*, *cur*, *cuius*, *cm*, though the latter spellings are much commoner in the manuscripts, the readings of which are kept in our text. *Quom* is not infrequent, being found vi. 42, 56, vii. 4, 105, viii. 1, x. 6, and in other passages where slight emendation is necessary. *Quor* is found only corrected to *cur*, viii. 68, 71, and hidden under *quorum* corrected to *quod*, viii. 78. *Quoins* is written viii. 44, ix. — 43, x. 3, and in other passages where emendation is necessary. *Quoi* nowhere appears, unless it should be read for *qui* vi. 72, and *quoique* for *quoque* ix. 34, adopted in our text.

Both *qui* and *quo* are used for the abl sing, of the relative, and *quis* and *quibus* for the dat.-abl pl., and similar forms for *quidam*, *hi quo* is used with a plural antecedent of any gender: v. 108, vi. 2, 55, 82, vii. 26, viii. 83, ix. 1, x. 8, 41.

20. ALTER and NEUTER: Gen *alii* ix. 67 is found as well as *allerius* ix. 91 5 *neutri* ix. 62, *neutraie*) x. — 73, as well as *neutrius* ix. 1; dat fern, *aliae* x. 15.

21. CONTRACTED PERFECTS: Only the contracted perfects are found, such as *appellarunt* v. 22 etc., *declinarit* v. 7, *aberraro* v. 13, *appelassent* ix. 69, *curasse* vii. — 38, *consuerunt consuessent* ix. 68, *consuerit* ix. 14 *his*; exceptions, *norissent* vi. 60, *auspicaverit* vi. 86 (quoted), *nuncupavero* vii. 8 (quoted), *vitaverunt* x. 9-

INTRODUCTION

Similarly, the V is omitted after I, as in *praeteru* ix. 7, *prodierunt* v. 13, *expediero* viii. 24, etc.; exception, *quivero* v. 5 (*F*, for *quiero F*).

22. PONO in Perfect: The text always has *posui* and its forms, except twice, which we have standardized: *imposiverunt* viii. 8, *imposierint* ix. 34.

23. GERUNDIVES: Varro used the old form of the gerundive and gerund with UND in the third and fourth conjugations, but the forms have mostly been replaced by those with END. The remaining examples of the older form

areferundo v. 10%, *ferundum* vi. 9Q, *faciundo* vii. 9, *qnaerundae* vii. 35, *reprehendiindi* ix. 12, *reprehendundus* ix. 93.

24. VERSUS: The older forms *vorto*, *vorti*, *tor sus* are not found in the manuscript. The adverbial compounds of *versus* have (with one exception) been retained in our text as they appear in the manuscript: *susus versus* v. 158, *susum versus* ix. 65; *deorsum*, *susum* v. 161; *rursus* vi. 46, 49, ix. 86; *deosum versus* ix. 86; *prosus* and *rusus* (*rostts F*) x. 52.

MARCUS TERENTIUS VARRO by F. H. Belvoir



MARCUS TERENTIUS VARRO (B.C. 116-28) whom Quintilian called “the most learned of the Romans,” and Petrarch “il terzo gran lume Romano,” ranking him with Cicero and Virgil, probably studied agriculture before he studied any thing else, for he was born on a Sabine farm, and although of a well to do family, was bred in the habits of simplicity and rural industry with which the poets have made that name synonymous. All his life he amused the leisure snatched from his studies with intelligent supervision of the farming of his several estates: and he wrote his treatise *Rerum Rusticarum* in his eightieth year.

He had his share of active life, but it was as a scholar that he distinguished himself. Belonging to the aristocratic party, he became a friend and supporter of Pompey, and, after holding a naval command under him in the war against the Pirates in B.C. 67, was his legatus in Spain at the beginning of the civil wars and there surrendered to Caesar. He was again on the losing side at the battle of Pharsalia, but was pardoned by Caesar, who selected him to be librarian of the public library he proposed to establish at Rome. From this time Varro eschewed politics and devoted himself to letters, although his troubles were not yet at an end: after the death of Caesar, the ruthless Antony despoiled his villa at Casinum (where Varro had built the aviary described in book Three), and like Cicero he was included in the proscriptions which followed the compact of the triumvirs, but in the end unlike Cicero he escaped and spent his last years peacefully at his villas at Cumae and Tusculum.

His literary activity was astonishing: he wrote at least six hundred books covering a wide range of antiquarian research. St. Augustine, who dearly loved to turn a balanced phrase, says that Varro had read so much that it is difficult to understand when he found time to write, while on the other hand he wrote so much that one can scarcely read all his books. Cicero, who claimed him as an intimate friend, describes (*Acad.* III) what Varro had written before B.C. 46, but he went on producing to the end of his long life, eighteen years later: “For,” says Cicero, “while we are sojourners, so to speak, in our own city and wandering about like strangers, your books have conducted us, as it were, home again, so as to enable us at last to recognize who and whence we are. You have discussed the antiquities of our country and the variety of dates and chronology relating to it. You have explained the laws which regulate sacrifices and priests: you have unfolded the customs of the city both in war and peace: you have described the various quarters and districts: you have omitted mentioning none of the names, or kinds, or functions, or causes of divine or human things: you have thrown a flood of light on our poets and altogether on Latin literature and the Latin language: you have yourself

composed a poem of varied beauties and elegant in almost every part: and you have in many places touched upon philosophy in a manner sufficient to excite our curiosity, though inadequate to instruct us.”

Of Varro’s works, beside the *Rerum Rusticarum*, there have survived only fragments, including a considerable portion of the treatise on the Latin language: the story is that most of his books were deliberately destroyed at the procurement of the Church (something not impossible, as witness the Emperor Theodosius in *Corpus Juris Civilis*. Cod. Lib. I, tit. I, ca, § I) to conceal St. Augustine’s plagiarism from them; yet the *De Civitate Dei*, which is largely devoted to refuting Varro’s pagan theology, is a perennial monument to his fame. St. Augustine says (VI, 2): “Although his elocution has less charm, he is so full of learning and philosophy that ... he instructs the student of facts as much as Cicero delights the student of style.”

Varro’s treatise on farm management is the best practical book on the subject which has come down to us from antiquity. It has not the spontaneous originality of Cato, nor the detail and suave elegance of Columella. Walter Harte in his *Essays on Husbandry* (1764) says that Cato writes like an English squire and Varro like a French academician. This is just comment on Cato but it is at once too much and too little to say of Varro: a French academician might be proud of his antiquarian learning, but would balk at his awkward and homely Latin, as indeed one French academician, M. Boissier, has since done. The real merit of Varro’s book is that it is the well digested system of an experienced and successful farmer who has seen and practised all that he records.

The authority from which Virgil drew the practical farming lore, for which he has been extolled in all ages, was Varro: indeed, as a farm manual the *Georgics* go astray only when they depart from Varro. It is worth while to elaborate this point, which Professor Sellar, in his argument for the originality of Virgil, only suggests.

After Philippi the times were ripe for books on agriculture. The Roman world had been divided between Octavian and Antony and there was peace in Italy: men were turning “back to the land.”

An agricultural regeneration of Italy was impending, chiefly in viticulture, as Ferrero has pointed out. With far sighted appreciation of the economic advantages of this, Octavian determined to promote the movement, which became one of the completed glories of the Augustan Age, when Horace sang

Tua, Caesar, aetas
Fruges et agris rettulit uberes.

Varro’s book appeared in B.C. 37 and during that year Maecenas commissioned Virgil to put into verse the spirit of the times; just as, under similar circumstances, Cromwell pensioned Samuel Hartlib. Such is the coincidence of the dates that it is not impossible that the *Rerum Rusticarum* suggested the subject of the *Georgics*, either to Virgil or to Maecenas.

There is no evidence in the *Bucolics* that Virgil ever had any practical knowledge of agriculture before he undertook to write the *Georgics*. His father was, it is true, a farmer, but apparently in a small way and unsuccessful, for he had to eke out a frugal livelihood by keeping bees and serving as the hiring deputy of a *viator* or constable. This type of farmer persists and may be recognized in any rural community: but the agricultural colleges do not enlist such men into their faculties. So it is possible that Virgil owed little agricultural knowledge to his father's precepts or example. Virgil perhaps had tended his father's flock, as he pictures himself doing under the guise of Tityrus; certainly he spent many hours of youth "patulae recubans sub tegmine fagi" steeping his Celtic soul with the beauty and the melancholy poetry of the Lombard landscape: and so he came to know and to love bird and flower and the external aspects of

wheat and woodland tilth and vineyard, hive and horse and herd,

but it does not appear that he ever followed the plough, or, what is more important, ever laid off a ploughgate. As a poet of nature no one was ever better equipped (the highest testimony is that of Tennyson), but when it came to writing poetry around the art of farm management it was necessary for him to turn to books for his facts. He acknowledges (*Geo.* I, 176) his obligation only to *veterum praecepta* without naming them, but as M. Gaston Boissier says he was evidently referring to Varro "le plus moderne de tous les anciens." Virgil evidently regarded Varro's treatise as a solid foundation for his poem and he used it freely, just as he drew on Hesiod for literary inspiration, on Lucretius for imaginative philosophy, and on Mago and Cato and the two Sasernas for local colour.

Virgil probably had also the advantage of personal contact with Varro during the seven years he was composing and polishing the *Georgics*. He spent them largely at Naples (*Geo.* IV, 563) and Varro was then established in retirement at Cumae: thus they were neighbours, and, although they belonged to different political parties, the young poet must have known and visited the old polymath; there was every reason for him to have taken advantage of the opportunity. Whatever justification there may be for this conjecture, the fact remains that Varro is in the background every where throughout the *Georgics*, as the "deadly parallel" in the appended note will indicate. This is perhaps the most interesting thing about Varro's treatise: instructive and entertaining as it is to the farmer, in the large sense of the effect of literature on mankind, Virgil gave it wings — the useful cart horse became Pegasus.

As a consequence of the chorus of praise of the *Georgics*, there have been those, in all ages, who have sneered at Virgil's farming. The first such *advocatus diaboli* was Seneca, who, writing to Lucilius (*E*) from the farm house of Scipio Africanus, fell foul of the advice (*Geo.* I, 216) to plant both beans and millet in the spring, saying that he had just seen at the end of June beans gathered and millet sowed on the same day: from which he generalized that Virgil disregarded the truth to turn a graceful verse, and sought rather to

delight his reader than to instruct the husbandman. This kind of cheap criticism does not increase our respect for Nero's philosophic minister. Whatever may have been Virgil's mistakes, every farmer of sentiment should thank God that one of the greatest poems in any language contains as much as it does of a sound tradition of the practical side of his art, and here is where Varro is entitled to the appreciation which is always due the schoolmaster of a genius.

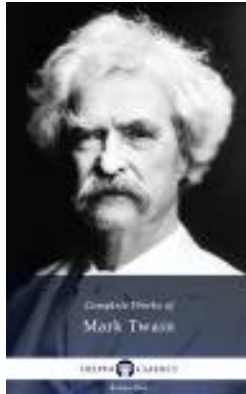
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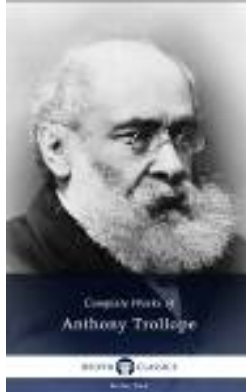
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Oscar Wilde
Robert Louis Stevenson
Sir Arthur Conan Doyle
Sir Walter Scott
The Brontës
Thomas Hardy
Virginia Woolf
Wilkie Collins
William Makepeace Thackeray



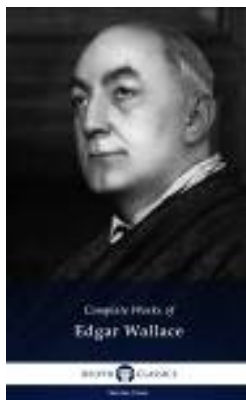
Series Two

Alexander Pushkin
Alexandre Dumas (English)
Andrew Lang
Anthony Trollope
Bram Stoker
Christopher Marlowe
Daniel Defoe
Edith Wharton
F. Scott Fitzgerald
G. K. Chesterton
Gustave Flaubert (English)
H. Rider Haggard
Herman Melville
Honoré de Balzac (English)
J. W. von Goethe (English)
Jules Verne
L. Frank Baum
Lewis Carroll
Marcel Proust (English)
Nathaniel Hawthorne
Nikolai Gogol
O. Henry
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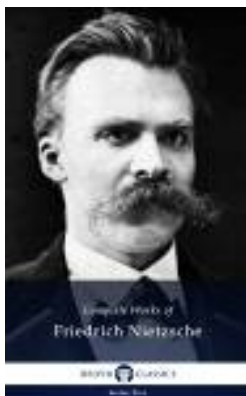
Series Three

Ambrose Bierce
Ann Radcliffe
Ben Jonson
Charles Lever
Émile Zola
Ford Madox Ford
Geoffrey Chaucer
George Gissing
George Orwell
Guy de Maupassant
H. P. Lovecraft
Henrik Ibsen
Henry David Thoreau
Henry Fielding
J. M. Barrie
James Fenimore Cooper
John Buchan
John Galsworthy
Jonathan Swift
Kate Chopin
Katherine Mansfield
L. M. Montgomery
Laurence Sterne
Mary Shelley
Sheridan Le Fanu
Washington Irving



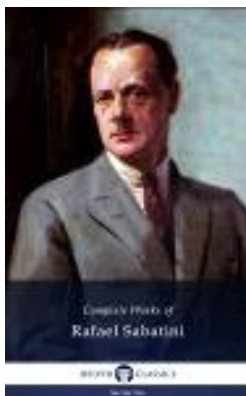
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Arnold Bennett
Arthur Machen
Beatrix Potter
Bret Harte
Captain Frederick Marryat
Charles Kingsley
Charles Reade
G. A. Henty
Edgar Rice Burroughs
Edgar Wallace
E. M. Forster
E. Nesbit
George Meredith
Harriet Beecher Stowe
Jerome K. Jerome
John Ruskin
Maria Edgeworth
M. E. Braddon
Miguel de Cervantes
M. R. James
R. M. Ballantyne
Robert E. Howard
Samuel Johnson
Stendhal
Stephen Crane
Zane Grey



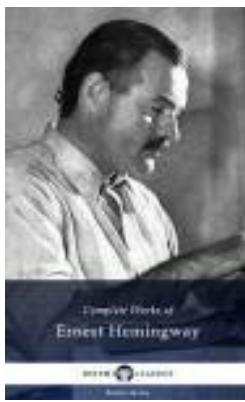
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Algernon Blackwood
Anatole France
Beaumont and Fletcher
Charles Darwin
Edward Bulwer-Lytton
Edward Gibbon
E. F. Benson
Frances Hodgson Burnett
Friedrich Nietzsche
George Bernard Shaw
George MacDonald
Hilaire Belloc
John Bunyan
John Webster
Margaret Oliphant
Maxim Gorky
Oliver Goldsmith
Radclyffe Hall
Robert W. Chambers
Samuel Butler
Samuel Richardson
Sir Thomas Malory
Thomas Carlyle
William Harrison Ainsworth
William Dean Howells
William Morris



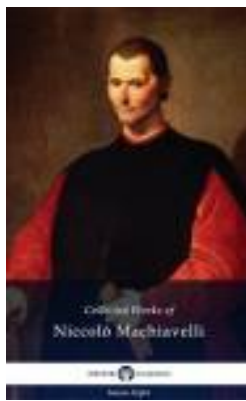
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Anthony Hope
Aphra Behn
Arthur Morrison
Baroness Emma Orczy
Captain Mayne Reid
Charlotte M. Yonge
Charlotte Perkins Gilman
E. W. Hornung
Ellen Wood
Frances Burney
Frank Norris
Frank R. Stockton
Hall Caine
Horace Walpole
One Thousand and One Nights
R. Austin Freeman
Rafael Sabatini
Saki
Samuel Pepys
Sir Issac Newton
Stanley J. Weyman
Thomas De Quincey
Thomas Middleton
Voltaire
William Hazlitt
William Hope Hodgson



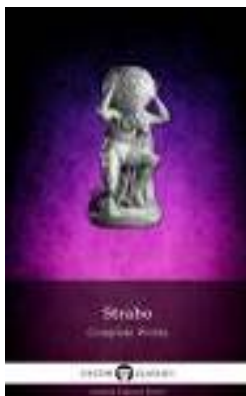
Series Seven

Adam Smith
Benjamin Disraeli
Confucius
David Hume
E. M. Delafield
E. Phillips Oppenheim
Edmund Burke
Ernest Hemingway
Frances Trollope
Galileo Galilei
Guy Boothby
Hans Christian Andersen
Ian Fleming
Immanuel Kant
Karl Marx
Kenneth Grahame
Lytton Strachey
Mary Wollstonecraft
Michel de Montaigne
René Descartes
Richard Marsh
Sax Rohmer
Sir Richard Burton
Talbot Mundy
Thomas Babington Macaulay
W. W. Jacobs



Series Eight

Anna Katharine Green
Arthur Schopenhauer
The Brothers Grimm
C. S. Lewis
Charles and Mary Lamb
Elizabeth von Arnim
Ernest Bramah
Francis Bacon
Gilbert and Sullivan
Grant Allen
Henryk Sienkiewicz
Hugh Walpole
Jean-Jacques Rousseau
John Locke
John Muir
Joseph Addison
Lafcadio Hearn
Lord Dunsany
Marie Corelli
Niccolò Machiavelli
Ouida
Richard Brinsley Sheridan
Sigmund Freud
Theodore Dreiser
Walter Pater
W. Somerset Maugham



Ancient Classics

Achilles Tatius
Aeschylus
Ammianus Marcellinus
Apollodorus
Appian
Apuleius
Apollonius of Rhodes
Aristophanes
Aristotle
Arrian
Augustine
Aulus Gellius
Bede
Cassius Dio
Cato
Catullus
Cicero
Claudian
Clement of Alexandria
Cornelius Nepos
Demosthenes
Diodorus Siculus
Dionysius of Halicarnassus
Diogenes Laërtius
Euripides
Frontius
Herodotus
Hesiod
Hippocrates
Homer
Horace
Isocrates
Josephus
Julius Caesar
Juvenal
Livy
Longus

Lucan
Lucian
Lucretius
Marcus Aurelius
Martial
Nonnus
Ovid
Pausanias
Petronius
Pindar
Plato
Plautus
Pliny the Elder
Pliny the Younger
Plotinus
Plutarch
Polybius
Procopius
Propertius
Quintus Curtius Rufus
Quintus Smyrnaeus
Sallust
Sappho
Seneca the Younger
Septuagint
Sextus Empiricus
Sidonius
Sophocles
Statius
Strabo
Suetonius
Tacitus
Terence
Theocritus
Thucydides
Tibullus
Varro
Virgil
Xenophon



Delphi Poets Series

A. E. Housman
Alexander Pope
Alfred, Lord Tennyson
Algernon Charles Swinburne
Andrew Marvell
Beowulf
Charlotte Smith
Christina Rossetti
D. H. Lawrence (poetry)
Dante Alighieri (English)
Dante Gabriel Rossetti
Delphi Poetry Anthology
Edgar Allan Poe (poetry)
Edmund Spenser
Edward Lear
Edward Thomas
Edwin Arlington Robinson
Ella Wheeler Wilcox
Elizabeth Barrett Browning
Emily Dickinson
Epic of Gilgamesh
Ezra Pound
Friedrich Schiller (English)
George Chapman
George Herbert
Gerard Manley Hopkins
Gertrude Stein
Hafez
Heinrich Heine
Henry Howard, Earl of Surrey
Henry Wadsworth Longfellow
Isaac Rosenberg
James Russell Lowell
Johan Ludvig Runeberg
John Clare
John Donne
John Dryden
John Keats
John Milton
John Wilmot, Earl of Rochester
Joseph Addison
Kahlil Gibran
Leigh Hunt
Lord Byron
Ludovico Ariosto
Luís de Camões
Matthew Arnold
Matthew Prior
Michael Drayton
Nikolai Nekrasov
Paul Laurence Dunbar

Percy Bysshe Shelley
Petrarch
Ralph Waldo Emerson
Robert Browning
Robert Burns
Robert Frost
Robert Southey
Rumi
Rupert Brooke
Samuel Taylor Coleridge
Sir Philip Sidney
Sir Thomas Wyatt
Sir Walter Raleigh
Thomas Chatterton
Thomas Gray
Thomas Hardy (poetry)
Thomas Hood
Thomas Moore
Torquato Tasso
T. S. Eliot
W. B. Yeats
Walter Savage Landor
Walt Whitman
Wilfred Owen
William Blake
William Cowper
William Wordsworth

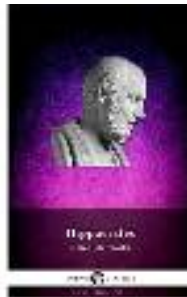


Masters of Art

Albrecht Dürer
Amedeo Modigliani
Artemisia Gentileschi
Camille Pissarro
Canaletto
Caravaggio
Caspar David Friedrich
Claude Lorrain
Claude Monet
Dante Gabriel Rossetti

Diego Velázquez
 Donatello
 Edgar Degas
 Édouard Manet
 Edvard Munch
 El Greco
 Eugène Delacroix
 Francisco Goya
 Giotto
 Giovanni Bellini
 Gustave Courbet
 Gustav Klimt
 Hieronymus Bosch
 Jacques-Louis David
 James Abbott McNeill Whistler
 J. M. W. Turner
 Johannes Vermeer
 John Constable
 Leonardo da Vinci
 Michelangelo
 Paul Cézanne
 Paul Gauguin
 Paul Klee
 Peter Paul Rubens
 Piero della Francesca
 Pierre-Auguste Renoir
 Pieter Bruegel the Elder
 Sandro Botticelli
 Raphael
 Rembrandt van Rijn
 Thomas Gainsborough
 Tintoretto
 Titian
 Vincent van Gogh
 Wassily Kandinsky

Alphabetical List of Titles



A. E. Housman
 Achilles Tatius
 Adam Smith
 Aeschylus

Albrecht Dürer
Alexander Pope
Alexander Pushkin
Alexandre Dumas (English)
Alfred, Lord Tennyson
Algernon Blackwood
Algernon Charles Swinburne
Ambrose Bierce
Amedeo Modigliani
Ammianus Marcellinus
Anatole France
Andrew Lang
Andrew Marvell
Ann Radcliffe
Anna Katharine Green
Anthony Hope
Anthony Trollope
Anton Chekhov
Aphra Behn
Apollodorus
Apollonius of Rhodes
Appian
Apuleius
Aristophanes
Aristotle
Arnold Bennett
Arrian
Artemisia Gentileschi
Arthur Machen
Arthur Morrison
Arthur Schopenhauer
Augustine
Aulus Gellius
Baroness Emma Orczy
Beatrix Potter
Beaumont and Fletcher
Bede
Ben Jonson
Benjamin Disraeli
Beowulf
Bram Stoker
Bret Harte
C. S. Lewis
Camille Pissarro
Canaletto
Captain Frederick Marryat
Captain Mayne Reid
Caravaggio
Caspar David Friedrich
Cassius Dio
Cato
Catullus
Charles and Mary Lamb

Charles Darwin
Charles Dickens
Charles Kingsley
Charles Lever
Charles Reade
Charlotte M. Yonge
Charlotte Perkins Gilman
Charlotte Smith
Christina Rossetti
Christopher Marlowe
Cicero
Claude Lorrain
Claude Monet
Claudian
Clement of Alexandria
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Cornelius Nepos
D. H. Lawrence (poetry)
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E. M. Forster
E. Nesbit
E. Phillips Oppenheim
E. W. Hornung
Edgar Allan Poe
Edgar Allan Poe (poetry)
Edgar Degas
Edgar Rice Burroughs
Edgar Wallace
Edith Wharton
Edmund Burke
Edmund Spenser
Édouard Manet
Edvard Munch
Edward Bulwer-Lytton
Edward Gibbon
Edward Lear
Edward Thomas
Edwin Arlington Robinson

El Greco
Elizabeth Barrett Browning
Elizabeth Gaskell
Elizabeth von Arnim
Ella Wheeler Wilcox
Ellen Wood
Émile Zola
Emily Dickinson
Epic of Gilgamesh
Ernest Bramah
Ernest Hemingway
Eugène Delacroix
Euripides
Ezra Pound
F. Scott Fitzgerald
Ford Madox Ford
Frances Burney
Frances Hodgson Burnett
Frances Trollope
Francis Bacon
Francisco Goya
Frank Norris
Frank R. Stockton
Friedrich Nietzsche
Friedrich Schiller (English)
Frontius
Fyodor Dostoyevsky
G. A. Henty
G. K. Chesterton
Galileo Galilei
Geoffrey Chaucer
George Bernard Shaw
George Chapman
George Eliot
George Gissing
George Herbert
George MacDonald
George Meredith
George Orwell
Gerard Manley Hopkins
Gertrude Stein
Gilbert and Sullivan
Giotto
Giovanni Bellini
Grant Allen
Gustav Klimt
Gustave Courbet
Gustave Flaubert (English)
Guy Boothby
Guy de Maupassant
H. G. Wells
H. P. Lovecraft
H. Rider Haggard

Hafez
Hall Caine
Hans Christian Andersen
Harriet Beecher Stowe
Heinrich Heine
Henrik Ibsen
Henry David Thoreau
Henry Fielding
Henry Howard, Earl of Surrey
Henry James
Henry Wadsworth Longfellow
Henryk Sienkiewicz
Herman Melville
Herodotus
Hesiod
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Hilaire Belloc
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Honoré de Balzac (English)
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Horace Walpole
Hugh Walpole
Ian Fleming
Immanuel Kant
Isaac Rosenberg
Isocrates
Ivan Turgenev
J. M. Barrie
J. M. W. Turner
J. W. von Goethe (English)
Jack London
Jacques-Louis David
James Abbott McNeill Whistler
James Fenimore Cooper
James Joyce
James Russell Lowell
Jane Austen
Jean-Jacques Rousseau
Jerome K. Jerome
Johan Ludvig Runeberg
Johannes Vermeer
John Buchan
John Bunyan
John Clare
John Constable
John Donne
John Dryden
John Galsworthy
John Keats
John Locke
John Milton
John Muir

John Ruskin
John Webster
John Wilmot, Earl of Rochester
Jonathan Swift
Joseph Addison
Joseph Addison
Joseph Conrad
Josephus
Jules Verne
Julius Caesar
Juvenal
Kahlil Gibran
Karl Marx
Kate Chopin
Katherine Mansfield
Kenneth Grahame
L. Frank Baum
L. M. Montgomery
Lafcadio Hearn
Laurence Sterne
Leigh Hunt
Leo Tolstoy
Leonardo da Vinci
Lewis Carroll
Livy
Longus
Lord Byron
Lord Dunsany
Louisa May Alcott
Lucan
Lucian
Lucretius
Ludovico Ariosto
Luís de Camões
Lytton Strachey
M. E. Braddon
M. R. James
Marcel Proust (English)
Marcus Aurelius
Margaret Oliphant
Maria Edgeworth
Marie Corelli
Mark Twain
Martial
Mary Shelley
Mary Wollstonecraft
Matthew Arnold
Matthew Prior
Maxim Gorky
Michael Drayton
Michel de Montaigne
Michelangelo
Miguel de Cervantes

Nathaniel Hawthorne
Niccolò Machiavelli
Nikolai Gogol
Nikolai Nekrasov
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Oliver Goldsmith
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Paul Cézanne
Paul Gauguin
Paul Klee
Paul Laurence Dunbar
Pausanias
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Petrarch
Petronius
Piero della Francesca
Pierre-Auguste Renoir
Pieter Bruegel the Elder
Pindar
Plato
Plautus
Pliny the Elder
Pliny the Younger
Plotinus
Plutarch
Polybius
Procopius
Propertius
Quintus Curtius Rufus
Quintus Smyrnaeus
R. Austin Freeman
R. M. Ballantyne
Radclyffe Hall
Rafael Sabatini
Ralph Waldo Emerson
Raphael
Rembrandt van Rijn
René Descartes
Richard Brinsley Sheridan
Richard Marsh
Robert Browning
Robert Burns
Robert E. Howard
Robert Frost
Robert Louis Stevenson
Robert Southey
Robert W. Chambers
Rudyard Kipling

Rumi
Rupert Brooke
Saki
Sallust
Samuel Butler
Samuel Johnson
Samuel Pepys
Samuel Richardson
Samuel Taylor Coleridge
Sandro Botticelli
Sappho
Sax Rohmer
Seneca the Younger
Septuagint
Sextus Empiricus
Sheridan Le Fanu
Sidonius
Sigmund Freud
Sir Arthur Conan Doyle
Sir Issac Newton
Sir Philip Sidney
Sir Richard Burton
Sir Thomas Malory
Sir Thomas Wyatt
Sir Walter Raleigh
Sir Walter Scott
Sophocles
Stanley J. Weyman
Statius
Stendhal
Stephen Crane
Strabo
Suetonius
T. S. Eliot
Tacitus
Talbot Mundy
Terence
The Brontës
The Brothers Grimm
Theocritus
Theodore Dreiser
Thomas Babington Macaulay
Thomas Carlyle
Thomas Chatterton
Thomas De Quincey
Thomas Gainsborough
Thomas Gray
Thomas Hardy
Thomas Hardy (poetry)
Thomas Hood
Thomas Middleton
Thomas Moore
Thucydides

Tibullus
Tintoretto
Titian
Tobias Smollett
Torquato Tasso
Varro
Victor Hugo
Vincent van Gogh
Virgil
Virginia Woolf
Voltaire
W. B. Yeats
W. Somerset Maugham
W. W. Jacobs
Walt Whitman
Walter Pater
Walter Savage Landor
Washington Irving
Wassily Kandinsky
Wilfred Owen
Wilkie Collins
William Blake
William Cowper
William Dean Howells
William Harrison Ainsworth
William Hazlitt
William Hope Hodgson
William Makepeace Thackeray
William Morris
William Shakespeare
William Wordsworth
Xenophon
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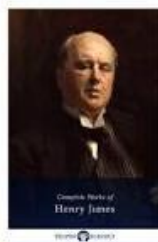
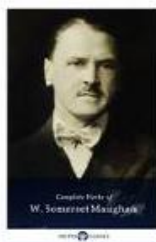
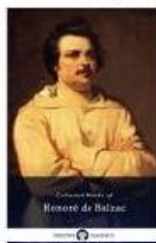
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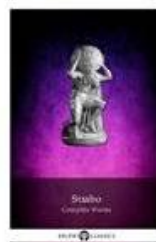
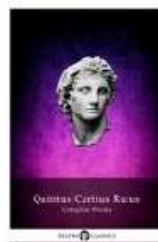
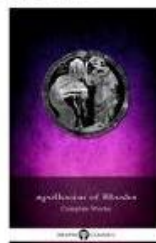
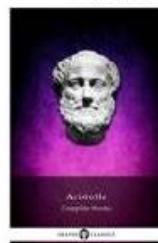
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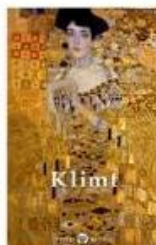
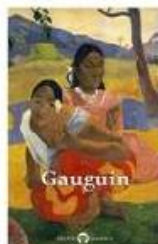
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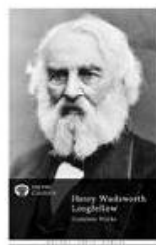
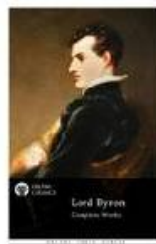
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